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I

COLLEGE REQUIREMENTS IN LATIN AND THE SCHOOL CURRICULUM [1]

"Thou art the man."

One need not be a constant reader of the current educational publications to know that there is widespread uneasiness among the friends of Latin learning. It is not necessary to enter the hall in which the latest assembly of classical teachers is convened to detect the current of anxiety in the atmosphere—on the sidewalk outside even you feel that something or other is not quite as it should be. The octopus has gobbled all but a straggling remnant of the Greeks, and now, alas, the bandersnatch is reaching out after the Latins. Now and then, to be sure, some cheerful optimist drags forth a fresh batch of statistics showing clearly that not all is lost, but rather much gained, and we smile hopefully and congratulate each other and clap our neighbor on the back and go home, knowing all the time, in the deep of our heart, that the case is and remains desperate with no known remedy in our pedagogical pharmacopœia. The worst of it all, perhaps, is our own discouragement. We feel ourselves to be a forlorn hope of classicalism, fighting a losing battle against impossible odds.

Much reflection has revealed a multitude of causes for this state of things. American education is a hybrid thing, a

[1] Read at the meeting of the New Hampshire Classical Association, October 17, 1908.

kind of modern Minotaur, devouring our youth and leaving little but dry bones. With British beginnings and German accretions, it has not yet found itself, nor have we found ourselves in it. College ideals and university ideals are at odds within it, and we have not yet succeeded in blending them. The result is, of necessity, heterogeneous, unsystematic, and wasteful. In a century or so, perhaps, we shall have completed the evolution of an American type of education. In the meantime we must take the consequences of our rash attempt to harmonize two things radically different in nature. That there is something wrong, and very wrong, is admitted in a thousand tacit ways even by those professional pedagogues who hurrah loudest for American ways and methods. What are we to think of the countless "fads," of which our children have been the helpless victims, the "mud pie" subjects, the cross-cuts and royal-road-to-learning methods, which have so widely crowded out the notion of sound culture? They are the blind efforts of men who realize that something is not as it should be, but do not know what, or how or why. Many of them are so wild that a grain of common sense condemns them on sight, and yet they find sober advocates.

We are reminded that this is an age of materialism, and that America is too young to be anything but exceedingly materialistic. Our boys want to study something practical, and their fathers demand for them a training which will repay its cost, principal and interest, in hard dollars. Culture is very well indeed, no doubt, but it will never pay water rates and coal bills. Nice appreciation of golden Latinity will perhaps ornament a man, but what we want is something which will buy him bread and butter to spread it with. Let us have practical education,—away with the dead tongues! That this position is logically unsound as well as gross makes no difference to the practical mind of the American. We schoolmasters know that the so-called "practical subjects" have no more real earning power than the culture courses. German and French are rated as practical. So are economics and the history of banking and the like. Mathematics has a high place among the practicals—and so on. But the veriest

tyro knows that in more than ninety-nine per cent. of cases the college graduate earns nothing with the knowledge he has acquired in his "practical" courses. Again, does the collegian who wants a sound body go to work to develop it with "practical" exercises? Does he drive stakes or beat carpets to get his arms and trunk into condition? Yet the "practical" argument has overwhelming force in our education in directing the choice of courses.

The college instructors, who are our natural mentors, have a way of bringing the matter a little nearer home to us of the secondary school. We are told with varying degrees of politeness that we are ill-prepared for our work. We have the courage to take up the task of instructing beginners with a little more than half the necessary equipment. We do not begin to rank with our European colleagues in point of breadth and depth of scholarship. Many of us do not know what the vocative of *deus* is, nor do we know where to look for the last word on the subject. We are, in a word, enthusiastic and conscientious, but ignorant.

Worse yet, the reproachful voice goes on, our pupils go up to the colleges with no real interest in Latin, and it is our fault. We are a band of dry-as-dusts, or else we are intent upon marrying and giving in marriage, and care not at all whether our pupils are touched with the divine fire. Many of us too are not really teachers—we are teaching for a year or two only, until something better turns up, or until we can get together money to study law or divinity or medicine. Naturally we have no great interest in classical studies ourselves and less to communicate to our pupils. And so we make our Latin work dry and uninteresting, and many a potential Bentley or Lachmann is nipt in the bud by the cold blast of our indifference.

But that is not all. As a natural consequence of such shortcomings and deficiencies, we do not get good results. Our boys, when they do get into college, are wofully ignorant of many first principles. Many of them do not seem to have any real grasp of the elementary syntax. Some of them think that Augustus reigned as late as 500 or even

1500 A.D. One professor in a New England college, a most fair-minded and charming man, addressing some secondary teachers not long ago, remarked in a very modest and winning way: "As a matter of fact, you do not send your boys up to college with the ability to read easy Attic prose at sight." No doubt the same thing is true of Latin, and holds good of the candidates for other colleges as well. Our methods, then, are not adapted to the task before us, and we do not do our work well enough to suit the colleges.

It seems, then, that the colleges are not satisfied with us. On the other hand, most of us are thoroly dissatisfied with the colleges, and many of us sincerely believe that they are largely, in fact primarily, responsible for the decadence of Latin studies in this country, and that the battle is surely lost forever if they do not mend their ways. What shall we say in our defense?

In any discussion of the situation before us, one fundamental fact must be premised and thoroly understood. College instructors do not understand the problems of the secondary school, and with the rarest exceptions are not competent to direct preparatory work or to give good advice about it. This proposition will, no doubt, be disputed, first of all by the college man himself, but every thoughtful schoolmaster will recognize its truth. Whenever we call in a college man to address a meeting of schoolmasters we find at the end of a few sentences that we have a theorist before us with little or no practical grasp of his problem. Strange as it may seem, those who have had a season of preparatory teaching before being called to the college are soon no better than the others. It is nothing less than astonishing to see how rapidly the point of view changes in such cases. In a year or two, even in a few months, your newfledged college teacher has forgotten the school and all that went with it. This inability to understand the problems of secondary work is shown beyond all doubt by the character of the elementary textbooks prepared by college instructors, a matter which I hope to discuss in a later paper.

All of us who have had an opportunity to observe the

German *Gymnasiallehrer,* for example, will admit without cavil that we are not so well prepared as our European confrères. This applies to those of us who have had a graduate year or two, and even to many who have reached the Ph.D. On the other hand it must be conceded that our preparatory course is by no means so exacting as the European, either extensively or inextensively. We are not allowed so much time, we do not cover so much ground, and our system of education sets very different standards. These standards, by the way, are set for the schools by the colleges themselves.

Does it occur to these gentlemen of the colleges that their charge on this point is capable of developing into a very disagreeable boomerang? If we schoolmasters are inferior in scholarship to the Europeans, what of our college instructors? Can we not cry "*tu quoque*"? I well remember hearing a German professor begin the seminary work of the semester with a Latin discourse lasting one hour and a half on the origin, date, authorship, and meter of the Greek poem under discussion. This talk was delivered without notes and at a very high rate of speed, without a pause or a hitch of any kind, and was occasionally interrupted with a request to some of the students to get a necessary book, or the like, all in Latin. The subject of the investigation was Greek, tho the professor was one who lectured on Latin only. How many of our college men can duplicate that performance? How many of our Greek professors can write a Latin style equal to that of the late Professor Blass, for example?

And if we schoolmasters sometimes fail to radiate inspiration, is it always entirely our fault? Is it not a bare possibility that a few of us have been deadened rather than refreshed during our college courses? My own personal impression, corroborated by the testimony of many other secondary teachers, is that there is very little good cultural teaching in the colleges—teaching, I mean, of a kind which prompts men who are not specializing to choose Latin courses because they find in them uplift and inspiration and delight. If the college men with their wide range of authors to choose

from can not not get and hold their men and inspire them with a fondness for the classics, is it reasonable in them to lay the blame for it at our doors? And if we in college had our ardor for the great poets, for instance, smothered by dry-as-dust methods and by syntactical dissections of winged gold and silver song, is it strange that we have trouble sometimes in interesting our little fellows in the seventy-fifth charge of the Romans against the barbarians or any other choice bit of the battle, murder, and sudden death in ancient Gaul? If we are not always inspiring teachers, is no part of the blame due to those who taught us in college? All of us, of course, have much that we cherish in the memories of those days, but, oh, the rest of it!

But there is, as it seems to some of us, a far more serious side to all this. The preparatory course, as our system is now arranged, is dictated absolutely by the college entrance requirements, and these requirements at present are so mischievous in two ways that they spell ruin unless we can hope for early relief. It is useless and hopeless to demand good secondary teaching as long as we are bound by a rigid system which first kills interest, and secondly puts a premium on "cramming" processes and interlinear translations. Nor can we get far while we are compelled by small differences and irregularities to waste a large proportion of our strength and time, as is now the case. The present state of affairs is this. A school which prepares boys for Yale, Harvard, and Princeton is forced by economic reasons to prepare them together just as far as the respective requirements will allow. Large and rich schools may be able to separate them early, but small schools can not afford to hire teachers enough to do so. Further, the exigencies of the class and recitation schedule necessitate keeping them together as much as is anyway possible. Moreover, boys as a rule do not know until they are well along what college they will attend. As a result any freedom that might be allowed by one college is nullified by these economic necessities. Boys who are going to Harvard, for example, must pursue the same course as their Yale brethren until they

are near the end. The Harvard scheme which allows a larger elasticity in the secondary work is thereby defeated.

Unfortunately, however, tho the course must for these reasons be practically identical for all, there are divergences which are the despair of the schoolmaster, and, from every point of view, disgraceful to the colleges. All must read four books of Cæsar, Yale and Princeton demand six orations of Cicero, Harvard adds a seventh, and that *must* be the *Marcellus*. Yale must have the Eclogues, Princeton will not be satisfied without Sallust's *Catiline,* Harvard and Dartmouth require more preparation in sight reading, Yale candidates must have some practise in reading Nepos, and so on. Moreover one requires Cicero for its grammar and composition tests and makes it preliminary, while another sets Cicero in the finals. Preparatory school men know only too well that the burdens imposed by these differences are well-nigh intolerable. Many smaller schools can not bear them at all and are obliged to refuse their pupils preparation in one or more of the odds and ends. In larger schools the work is offered, but it entails a scattering of energy which can only be termed abominable. That college men, who claim to have the interests of Latin scholarship in America at heart, should inflict such hardships on the schools passes understanding. We can only repeat soberly and earnestly that it is a disgrace to the colleges.

If there were any sincerity behind all these impossible conditions, we could put up with them, perhaps, for the good of the cause. Unfortunately we know from the results of the entrance examinations, that the differences are nominal and not real. All these colleges want the same thing of our boys, and they want it in approximately the same quantity. Cockiness or pretense of superiority on the part of any one of the colleges is not justified by the actual results of the examinations. No one of them has a standard which is perceptibly higher than that of the others, as every secondary teacher knows from experience. Poor scholars get into them all, and there are well-known coaching schools which can put a boy into any one almost at will. They are all anxious to

get boys, and in large numbers, and somehow and sometime they let them in. The divergences in requirements which cause such unbearable hardship represent nothing real. All want a certain knowledge of the syntax, a fair vocabulary, some actual power in handling the language, a very little miscellaneous information—in short, a foundation fit to build on. That being so, why not be fair and honest about it and agree upon absolutely uniform entrance requirements? The schools would be relieved of a weight which is too heavy for some and most burdensome for all. We should all be immensely cheered, and the cause of Latin scholarship would be materially advanced. That this has not yet been done is one more proof that the college men have no idea of the problems that confront us in the school, and for the same reason it probably never will be done until we make it perfectly clear that we can not and will not endure it much longer. We too can be driven to a declaration of independence.

We have said that the present rigid preparatory course kills interest and puts a premium upon cramming processes. This is the most serious aspect of the whole situation. The fact is, all college opinion to the contrary notwithstanding, that a strict diet of Cæsar, Cicero, and Vergil is nauseating to the small boy. Those of us who are of riper years and wider experience can appreciate the political dexterity of the *Commentaries*. We can read them rapidly enough to get the sweep of the narrative and the simple power of the style. We can grasp something of the historical import of these conquests—but, it is a far different affair for the boy, conning it over in small daily bits largely as an exercise in language, for that is what it must be at that stage. A book of it is interesting enough, two are too much altogether, three an insufferable bore. That any boy should be compelled to gulp down four is enough to justify him in hating his Latin for the rest of his life. Nor is the case different with Cicero. To us moderns his oratory is turgid and bombastic. We soon get tired of it under the best conditions, much more the boy. Two orations at once may hold his interest, more is a surfeit. For Vergil rather more

may be said, but the fact remains that six books make far too large a dose. The average pupil finds Æneas with his continual piety and weeping too tiresome for words long before the end of the sixth is in sight. Would not the story of the fall of Troy be enough? Vergil is difficult Latin even for a mature mind, and very much that delights us elders is spoiled for the boy by the mere drudgery involved in getting at the meaning. The delicacies of the shading, the grace and power of the imagery, the pathos and the nobility are largely lost on us; why should we pretend that they ought to hold the interest of a growing lad of sixteen or seventeen thruout a whole long weary year? The story itself, which after all is the chief hold with the young, flags in the long run, vivid and dramatic tho it be in some places. We all know the difficulties connected with maintaining the pitch in epic poetry. In a word, then, our preparatory course is uninteresting because the work is monotonous. It lacks the first essential of interest, variety. This monotony is forced upon us by the college requirements. We are bound hand and foot and are obliged to hear the reproaches of our mentors for permitting conditions which they themselves inflict upon us. It is indeed easy for Professor Mentor to sit in his cushioned chair and complain that we fail to interest our boys in Latin, but we are wishing that he would try to do it himself under the conditions which he lays down for us. We are serenely conscious that he could not do it. We know further that he very generally fails to compass it even in the college under conditions of his own choosing. We may ask him with perfect justice how long his appetite would last, if his daily diet were limited to four or five dishes only. We may ask him if he ever heard of a modern language teacher who restricted his secondary work to the reading of parts of two or three long classic works, one per year. Teachers of French, for instance, call in interests and variety to help them win and hold their pupils—we are debarred from following their good example. Yes, indeed, we are willing to admit that the preparatory work is not interesting, but—it is not our fault.

Furthermore this monotonous routine of three authors, one per year, is not approved by the experience of the best practical pedagogues, I mean those of Germany and England. Somehow or other, in ways which we partly understand, but can not at present adopt in their entirety, the Englishmen and Germans (and the French too, for that matter) get results far superior to ours. Their experience dates back decades to our years, and whether we confess it or not, they have found out a few things about the child mind, of which our American cocksureness is delightfully unaware. We are a free and independent people and, of course, we may do exactly as we please, or as our colleges will let us, but any one of those master pedagogues abroad would laugh at the notion of compelling an innocent lad to read one author pure and undiluted for one whole year without relief. With them Cæsar and Ovid, Cicero and Ovid, Vergil and Livy, Cicero and Horace, appear in alternation, giving the needful stimulus of variety and interest. Why not be frank about it? Our present secondary course is dead, and ought to be buried without delay.

What, then, of remedy? It is perfectly clear to every one who is familiar with the situation that we must have relief and that soon, unless we are to give up the ship. We must somehow or other induce or compel the colleges to give us two things: first, perfectly definite and absolutely uniform entrance requirements, directed to testing knowledge of the language as a whole rather than of any specific works or authors; and, secondly, the consequent freedom, elasticity, and variety so sadly needed to lend interest to our secondary course. Tests of a minute and searching character upon small set portions of one or two authors might well be added, for within reasonable limits such examinations may be regarded as tests of one sort of power over the tongue. We now have Lodge's admirable word list to set us a standard of the vocabulary which may properly be required in sight translations. Let it be understood that words not numbered in his list are to be given to the candidate unless they are obvious derivations of familiar words. Let the sight pieces

be chosen with discretion, not, as now sometimes seems to be the case, for the purpose of holding up ideals or to give an impression of rigorous severity, but with a view to the practical ends of the occasion, pieces fit to test, not to terrify the candidate, nor to impress the public.

It has been suggested to me that we might do well to take a hint from the entrance regulations in force at Oxford and Cambridge, England. As a result of long experience, the English give practical recognition to a fact which our system ignores, namely, that there are two classes of men to be dealt with in education; first, the scholars, those who, for one reason or another, will work hard and strive for sound learning and high rank; secondly, the men who attend the university merely for the sake of the social opportunities and advantages, or to lay a foundation of general culture as a desirable preliminary to specialized technical studies. The English separate the two classes and give them different treatment. As regards the entrance examinations, the authorities seem to reason in some such way as this: "We need not worry at all about the honor men—they will look out for themselves. We do not want to know whether a man knows too much, but we wish to keep out those who know too little. Let us therefore set a test which will let in all who will make respectable pass men, and will exclude all others." The result is a simple examination, so easy that a fair student can pass it in many cases two full years before he leaves the school, so very simple, in a word, that, at the end of the school course all can pass it whom the university is willing to receive at all, all who are regarded as proper subjects for university training, and no others—and when we say "pass it," we mean *really solve* it and get the right answer, as one might be expected to do in case of a mathematical problem. How simple and straightforward and, above all, how practical all this is beside the perplexities of our own system! We all know the difficulties which beset the reader of entrance papers. It is easy to sort out the excellent work and to reject another percentage as obviously unfit, but when it comes to sifting the remainder, there's the rub! It requires

almost superhuman clairvoyance to decide with justice the the fate of the boy who, in his mad, anxious struggle with one of our unreasonable sight papers, gets no sense at all out of one-third and nonsense out of another with possibly some faint glimmerings about the rest. College readers reject some such papers and accept others, on what principle we have not yet been able to determine—the process seems quite impartial. If the passage were simple enough so that the boy ought to read it with understanding and translate it with substantial accuracy, and get four-fifths of it right, or else stay in outer darkness until he can learn to do all of that, the matter would be simple enough for all parties concerned, college, preparatory teacher, and the candidate himself. We should all know what we are doing, to the great general comfort. As a matter of fact any one of the last half dozen pages of *Fabulae faciles* would make a good test of a boy's ability to do college Latin. A candidate who could read it with substantial accuracy at sight, and give some explanation of modes and cases would make good college material. His comrade who could not would need longer preparation. It is in some such sense as this that I am about to use the words "moderate difficulty." The requirements might perhaps be formulated as follows:

I. A sight translation of a piece of Latin prose of moderate difficulty, with questions on the syntax, especially of the usual modes and cases, and on the ordinary forms.

II. A sight translation of a piece of Latin poetry of moderate difficulty, with questions on poetic constructions and usages, figures of speech, and the like.

III. The translation into Latin of a piece of English narrative or of detached sentences or both—not based upon any specific Latin author, and easy enough to be fairly within the powers of a student who has finished Ritchie's *Exercises in Latin prose composition*, or a book of that grade. The vocabulary is to be limited to the numbered words in Lodge's list.

IV. A more minute examination upon Cicero's *Archias and Manilian law*, or the *Archias* and *I-II against Catiline*

(papers being set on both), with questions of moderate difficulty directed to testing knowledge of the subject-matter, historical references, course of the argument, history of the author, and the like.

V. A similar minute examination upon Vergil's *Æneid,* books II-III, or Ovid's *Metamorphoses,* 1500 lines, myths to be specified (papers to be set on both), with questions similar to those on Cicero, with the addition of scansion.

N.B. Credit will not be given for IV or V unless either I, II, or III is past at the same time or at a previous examination.

Some such solution as this, it seems to me, is our only hope if Latin is to stem the tide. Experience shows us that we can not hope for any spontaneous relief from the college men. They are honest and well-meaning, no doubt, but their attitude is, as it has been, characteristically uncomprehending and selfish, not to say arrogant. For decades they have been sitting "on the hills like gods together, careless of mankind," and there is very little hope that they will come over and help us unless we bestir ourselves unceasingly. In season and out of season, at every gathering of schoolmasters, in the periodicals, in public and in private, it behooves us to agitate and to keep alive the issue of uniform entrance examinations and freedom of curriculum for the schools. If we let the fire die, we may be sure that the college men will not fan it. Nor must we let ourselves be influenced by any protests from those secondary teachers who are mere "crammers," or who prepare boys for one college only, and are satisfied with the present system because it is easily adaptable to their ends and methods. The fight is for those who really value Latin studies for their own sake and are not ready to see them thrown overboard after the Greek. *Amicus certus in re incerta cernitur.*

FREDERICK M. DEFOREST

HOUSTON SCHOOL
SPOKANE, WASH.

II

RETARDATION: ITS SIGNIFICANCE AND ITS MEASUREMENT

It is a significant thing that with all our pride in our public school system, with all our profest regard for this bulwark of our democracy, the American public should listen with such rapt attention to the voice of the destructive critic. A few well chosen phrases, such as "we are sacrificing the child to the system," will gain a respectful hearing for almost any kind of educational balderdash. Demonstration is not asked. Emphasis seems to be the only thing required to obtain prominent publicity in our newspaper press, and not infrequently the fervid plaudits of educational gatherings.

If the lay critic can thus evoke admiration, if not stimulate thought, how much greater attention should we give to the constructive criticism which comes from men engaged in school work and acquainted at first hand with its problems? If the study of elimination and retardation in our public schools has led to some startling conclusions, it has happily been free from sensationalism. It has been prompted by no desire to exploit evils, but by a serious effort to show some distasteful facts only in the hope that we may thereby discover something of their causes and so seek a remedy.

To some these problems which appear to involve the whole question of the efficiency of our public school systems, constitute the most important phase of present day educational discussion. Yet to the casual observer this discussion might readily appear as a curious compound of frantic assertion and calm indifference. On the one hand, it is said that few of our pupils reach the conclusion of the elementary school course, that in all stages of the school plan there is a large proportion of backward or retarded children who can never hope to finish even their elementary studies, and that in con-

sequence our schools are pouring out every year a horde of youngsters very ill prepared for the duties of life. When such statements receive any attention whatever—and too often they are received with an impressive silence—we are informed either that all this is nothing new or that its significance has been exaggerated.

What are the facts in the case? Simply that in all public school systems which have been thus far examined there is observed in every grade of a school system a considerable proportion of pupils who are too old for the grades in which they are found. A single case will exemplify the point, and I choose for this purpose some hitherto unpublished figures which have been courteously supplied me by the Superintendent of Schools of Springfield, Ohio.

SPRINGFIELD, OHIO, JUNE, 1908
AGES AND GRADES OF PUPILS IN PUBLIC SCHOOLS

Ages Years	GRADES 1	2	3	4	5	6	7	8	Total
6	482	10	0	0	0	0	0	0	492
7	319	231	32	0	0	0	0	0	582
8	114	314	250	36	0	0	0	0	714
9	34	154	243	184	15	0	0	0	630
10	10	84	187	257	124	25	3	0	690
11	2	33	91	172	236	121	26	2	683
12	0	11	43	121	170	208	101	12	666
13	1	7	21	49	105	154	159	121	617
14	1	2	7	22	58	127	136	154	507
15	0	1	1	7	27	49	69	103	257
16	0	0	2	1	8	11	16	34	72
17	0	0	1	0	0	0	2	6	9
Totals	963	847	878	849	743	695	512	432	5919
Above normal age	162	292	353	372	368	341	223	143	2254
% " " "	16.8	34.4	40 2	43.8	49.5	49 0	43.5	33.1	38.0

In this table a heavy line separates those who are of normal age and under from those of above normal age, the conventional standard used being to consider in the first grade all children of eight years and over as above normal age, and so on progressively in the several grades.

The table exhibits the cumulative effect of failure. While

in the first grade only sixteen and eight-tenths per cent. of the pupils are above normal age, this rises to forty-nine and five-tenths per cent. in the fifth grade. Or looking at the matter in another way, we may note that while eight-year-old children should normally be in the second grade, sixteen per cent. of them are below that grade, but that of the thirteen-year-old children who should normally be in the seventh grade, as many as fifty-four and six-tenths per cent. are below that grade. Similar figures have been gathered quite recently in a considerable number of places. Whenever they have been brought together, and whatever the basis of the enumeration (total enrollment, enrollment on a given day, etc.) they always show a considerable percentage of retarded, backward, or over-age pupils, which rarely falls below twenty per cent. of all the pupils and sometimes rises as high as sixty per cent.

But we are told that this is no new problem, that schoolmen have long been aware of this state of affairs. That the problem is not new may be readily conceded, but this does not make it any the less real. It may be an old truth which we are now really seeing for the first time because we have found in such tables as I have quoted a more vivid and forceful statement than we ever had before. If, moreover, school men have long been cognizant of this state of affairs, it must be confest that they have been strangely reticent both as regards its extent and its causes.

Far more important is the suggestion that erroneous methods have been employed to determine the amount of retardation, that certain pupils are termed retarded, who should not be so designated. There is a clear implication that such inclusion has resulted in an exaggerated and distorted view of the case. Such an implication warrants serious consideration. We should rejoice should it prove that the evil which we have descried, does not in fact exist, but is merely a defect of our means of vision.

With such a possibility before us we may well review fundamental concepts, and ask the question "What is retardation?"

Technical terms are not always self-explanatory. They

acquire conventional meanings which modify their obvious significance. To express a certain result which we find in our schools we have borrowed the term "retardation" from one —the most important—of the processes by which that result is reached. So far as there is a difference of opinion among those who have thought and written on this subject, it arises from the fact that one emphasizes the result, and the other the process. The result referred to, however caused, is a disparity between the ages of pupils in the schools and the grades in which they are found. The process referred to is the failure of pupils to secure promotion and thus a slow rate of progress.

Commenting on some very excellent work of Dr. Cornman of Philadelphia, Superintendent Greenwood of Kansas City voices his dissent as follows: "The only correct way to estimate retardation or the slow movement of a pupil, is the length of time it takes him to do a year's work. It is not a question of age without respect to progress, but it is one of time required to do a given amount of work within a specified time without regard to age. Suppose two boys enter college, one sixteen years old and the other nineteen, and each one completes the four years' work on time. How would any one claim that the older one was retarded? So, if a child begins the regular grade work at eight and he does a full year's work each year till he completes the elementary course, that child is not retarded, and it would be puerile to class him as a backward pupil. (The only clear cases of retardation are those in which pupils are kept longer on a certain unit of work than is prescribed in the course of study.) Many intelligent, sensible parents, especially in the middle and western sections of the United States, prefer not to send their children to any kind of school until the age of eight, and where such children do enter school they go forward rapidly and easily in their studies, often skipping classes."

Dr. Cornman with many others has used the criterion of age. Mr. Greenwood would have us use the rate of progress only. Are there then defects in the age standard which disqualify it, and excellences in the progress standard which

make it alone applicable? If so, much of our recent discussion of this subject has been wandering in false paths, and it is high time to retrace our steps. But whether this be true or not can not be decided by an appeal to the primary meaning of the word retardation, but must take into account the conventional meaning which it has acquired.

The phenomenon of retardation however measured has been recognized as fundamentally important from two standpoints, that of the school and that of the child.

From the standpoint of the school the significance lies in what Mr. Greenwood has aptly termed the "spread of the ages." The "spread" is altogether too broad for efficient teaching. The classes are too heterogeneous. Age differences beget subtle differences in habits and modes of thought which impair the unity of teaching, and burden the teacher. Their ten-year-old child is out of place in the first grade, and because he is out of place he is a nuisance. He requires a different discipline, a different mode of teaching. Nor is it very material from this view-point how the older child came to be among the younger pupils, whether it was by a failure to be promoted, or because he was kept out of school by unwisely indulgent parents.

From the standpoint of the child the essential thing is his prospect of securing an education. Since so many children leave our schools at the ages of fourteen and fifteen years, the question how much education a pupil is likely to get resolves itself for the great majority into a question of how much they can get before reaching that age. If the law were the only force which brought children to school the amount each would receive would be measured by the number of years between the age seven or eight, as the case may be, and fourteen. But as children may go to school at the age of six, and in New England frequently enter the first grade at five, it is clear that such children have brighter prospects for an education, than those who wait till they are eight years old before going to school. A six-year-old child in the first grade will in all probability get more out of school before leaving it than one who is nine years old. Does it matter from this

point of view how the child came to be there at the age of nine—whether he failed to advance, or whether he was nine years old when he first came to school?

Many prominent educators would have us believe that it matters little when a child begins school. Some go so far as to say that even if there is an initial disadvantage for the child who enters late, he readily overcomes it and by rapid progress reaches his proper place in the school system. Mr. Greenwood has already been quoted to this effect. Elsewhere he has said: "There is not today an elementary course of study in the United States, but that a boy or girl nine or ten years of age, if turned loose on it and permitted to go ahead would not complete it in three or four years." The general principle may or may not be true, but the fact is that a child who enters our graded system of schools is not turned loose upon a course of study, nor is he generally permitted to go ahead.

If the children who entered late in our schools caught up as Mr. Greenwood supposes, his objection to the age standard of retardation would, at least so far as the upper grades are concerned, fall to the ground. By his supposition three or four years in school would overcome any initial disadvantage, and the child who entered late would be as far advanced for his age as he who entered early.

But unfortunately there is little evidence that many children "skip" grades. If there is any such rapid movement of some of the pupils, the published reports of our schools do not reveal its existence. Rapid progress thru the schools is represented by promotions over more than a grade, and by promotions during the year. These constituted in Somerville, Mass., in 1907 exactly one and four-tenths per cent. of all promotions. Again in Springfield, Ohio, where we have a record of 4755 promotions, there were only seven pupils who were promoted more than one grade. In Philadelphia among 122,644 promotions, 2406 are described as incidental. In the investigation conducted by the Russell Sage Foundation in New York City, Mr. Ayres found complete records for 946 pupils in the fifth grade. Of these only

fifty-one or a fraction over five per cent. had progrest more rapidly than the course of study contemplated.

But tho double promotions are only sparingly reported, we find a number of instances in which pupils are reported as finishing the course in less than the specified time. In Cambridge, Mass., in 1907 of all pupils who finished the primary course of three years four per cent. came thru in less than three years. In Somerville, Mass., in 1907 fourteen per cent. of all pupils finishing the elementary course did so in less than the allotted time of nine years. In Boston in 1895 twenty per cent. of those who finished the grammar course of six years did so in less than normal time. In 1908 in Kansas City about nine per cent. of those completing the elementary schools did so in less than the prescribed seven years.

Concerning these figures it may be said in the first place, that assuming their correctness, they embrace only a portion of the pupils who enter school. If these graduating classes represent as many as half the pupils who enter, it is safe to say that they include practically all the pupils who made rapid progress. As these are the specially gifted ones, who are likely to continue their education, it is not probable that any of them are numbered among those who have left school. In comparison with all the pupils, therefore, the proportion of those who advance rapidly is materially diminished.

But can we accept these figures at their face value? Do they not in all probability include some who as young children went to other schools, which they have failed to count? Not infrequently children are sent to private school for a year or more before they go to the public school. Cases also occur which can not be neglected in this consideration of the specially gifted, of children receiving home instruction, and entering school above the first grade.

It must, I believe, be granted that the child who starts late is at a disadvantage in our public school system, and that this disadvantage is rather permanent than temporary. Shall we, therefore, call him retarded? We have already seen that he produces in the school the same situation as he who fails to be promoted. His progress may be at the normal

rate. But progress means more than rapidity of movement. It means in many cases the ground which has been covered. Compared with his opportunities such a child has progrest little. He made a late start and is already behind his fellows in the race. Is it any twisting of words or violence of language to call him retarded?

But what of the implication that the age standard exaggerates conditions? If there were a reasonable doubt as to its propriety the question would mean how large a part of age retardation is ascribable to late entrance into school. Obviously this factor can not grow. It is fixt from the start and is found as an original proposition only in the first grade. Let us take an illustration from Kansas City. In the first grade there were in 1906-07 by the age standard twenty-five and two-tenths per cent. of the pupils retarded. There were also in the first grade 1232 pupils who had been there more than 200 days. If this is properly comparable with the total enrolment, it amounts to fifteen and nine-tenths per cent. who were retarded by lack of progress. Hence, in a total retardation of forty-eight and five-tenths per cent. in Kansas City schools by the age standard there is thirty-nine and two-tenths per cent. caused by failure, and nine and three-tenths per cent. by late entrance.

In New York City Mr. Ayres found that among 100 retarded children by the age standard such retardation was due to a late start in only about thirty cases. If there were any reason for eliminating late start as a cause of retardation, it would leave us with a volume of retardation about one-third less than is currently reported.

But suppose we apply the progress standard pure and simple. It is difficult of application because records of the number of years pupils have been in school are not frequent. In the hundred largest cities in the United States there are only five in whose reports I find the slightest information on the subject. In Cambridge we learn that thirty-five per cent. of the pupils fail to complete the primary grades in three years, the allotted time. There are no age figures for Cambridge, but in neighboring cities with similar conditions we

find the following percentages of retardation by the age standard in the fourth grade: Springfield, twenty-eight and nine-tenths; Boston, twenty-seven and six-tenths; Medford, seven and seven-tenths.

In Boston in 1897 there were forty-six per cent. of the pupils who took more than the regular time to finish the primary schools, while the age retardation in the fourth grade was only twenty-nine and three-tenths per cent. In the same city in 1894 thirty-four and five-tenths per cent. of the pupils took more than the regular time to finish the grammar grades, while the age retardation for the ninth grade in 1896 was twenty per cent.

Again in Somerville in 1907 in the graduating class thirty-six per cent. took more than nine years to complete the course. No age retardation figures are available, but it is doubtful whether they would differ greatly from those of Boston, where the age retardation in the ninth grade was sixteen and three-tenths per cent. in the same year.

Among 1517 pupils finishing the Kansas City schools in 1908 there were 719, or forty-seven and four-tenths per cent., who required more than the allotted seven years to finish the course, while the age retardation at the close of the seventh grade was fifty-one and two-tenths per cent. Here is a very slight difference in favor of the progress standard.

Figures are available in some places, e.g., Kansas City and Baltimore, showing number of children who have been more than a year in their present grade. If, as seems proper, these be added together for the first four years, to ascertain accumulated retardation at that time, the resulting figure gives a comparison not unfavorable to the age standard.

We therefore see that wherever there is an opportunity to test the relative results of the two methods the progress standard, with a single exception, gives higher percentages of retardation than does the age standard. This should absolve the advocates of the latter from the charge of exaggeration.

Moreover, those who have employed the age standard have been generous in its application. Very seldom has it been so rigorously applied as in Medford, Mass. In that city many

children enter the first grade at five years of age, and hence the superintendent takes five years as the normal age for the first grade. Calculating all above five years of age in the first grade as above normal age, and using corresponding figures in the upper grades, he discovers that out of 4036 school children, 3423, or eighty-four and eight-tenths, are retarded. But this is a strained and unusual application of the age standard. Generally any child under eight years of age in the first grade is considered of normal age, and those of eight years and upwards are considered as above normal age. For those who enter the first grade early, say at six, this allows for one failure, or by half-grades for two, before the child begins to be counted as retarded. On the other hand any pure progress standard makes no such allowance. Hence the percentage of retardation as measured by the age standard as commonly applied instead of being greater is apt to be less than when the progress standard is used.

Moreover, it is clear that the age standard is of easier application. It can be applied at any time. Perfect accuracy in the progress standard assumes perfect records of past school history. If these do not exist, but must first be established, we must wait eight or nine years before we can secure trustworthy results. This is a practical consideration which speaks loudly in favor of the age standard.

To sum up: the amount of retardation has not been overstated in current discussion. It is prevalent everywhere. Because of the impediments which it offers to the forcefulness and effectiveness of teaching, it is one of the most serious questions of school management. Because it is depriving our children of a part of the education which the state provides for them, it is most serious for the prospects of our future citizens. It is an old evil, newly stated. Every effort made to diminish it will redound to the benefit both of the schools and the children. Concerning its causes we are yet much in the dark, but who can doubt that out of the continued study of this greatest of problems of our school administration, will arise practical measures which will not abolish the evil, but will greatly lessen it?

WASHINGTON, D. C. ROLAND P. FALKNER

III

THE MISSION OF MUSIC IN COLLEGES [1]

The educational system of any period may be considered either as a cause or as an effect—that is, either as an agency modifying prevailing ideals, or as a resultant of ideals already in existence. Ordinarily, we view education in the first aspect, as a factor determining the life of the present and of the future. At times, however, we are led to view it in its complementary aspect, as being itself determined by the environment amid which it flourishes, in accordance with a principle analogous to that by virtue of which water may not rise above its source. Thus, the whole past, in education, acts as a check on the present and on the future. Altho, occasionally, this restraint impedes true progress, it makes, predominantly, for conservatism and for sanity, and is, in every way, salutary.

The course of American education has thus been determined, in part, by the character, thought, and activities of a race given over to the development of a virgin country and the formation of a new civilization. From time to time, as general progress has been made, educational ideals have been compelled to undergo successive adjustments. The restlessness of a people whose highest ideal has sometimes appeared to be the discovery and exploitation of unmeasured natural resources, has of necessity made an indelible imprint on our systems of education. These systems have, consequently, been kaleidoscopic in their changes—the same elements, in general, being present, from time to time; but in varying proportions and relationships. Collegiate emphasis, for instance, has been placed, at different periods, on theology, on "the humanities," on the exact sciences, on industrial pursuits; and is now begin-

[1] Paper read before the Music Teachers National Association, Washington, D. C., December 31, 1908.

ning to be placed, we believe, on esthetic and cultural studies, whose function is the enrichment of life. We can hope for comparative permanency in our educational systems only in proportion as our national character acquires repose.

And this is all as it should be. What higher ideal can we set before our educators, than to study the varying needs of a people in course of development, and to endeavor to satisfy them? It is as desirable as it is inevitable, that our systems of education should be plastic, ever re-adjusting themselves with changing conditions—ever forming, but never formed. Implasticity, whether in an individual, in a species, or in a system, is equally incompatible with progress. The early forms in any evolutionary process are, at the same time, the most impressionable.

If our educational systems at large can thus be described as, in a sense, formative, with what word shall we characterize the present status of the study of music—a study so recently developed, in America, that it is, as yet, only in process of articulation with the prevailing forms of educational thought? A recent bulletin of the United States Bureau of Education contains the following statements: "There is no coherence in the general scheme of music education. . . . To define the status of music education in the United States has been practically impossible."

Fortunately, this lack of coherence in music education is no cause for despair, in view of the fervent activity displayed in behalf of the new subject. Approximately one-half of the colleges in the United States, for example, already recognize the value of instruction in music sufficiently to grant credit for it toward the academic degree—the majority of them having adopted this policy within the present decade. In addition, approximately one-sixth of our colleges already allow entrance credit in music, in the academic course—the majority of them having adopted this policy only within the past five years. Many colleges, also, offer instruction in music, tho withholding credit of all kinds. Collegiate activity in music has, in fact, been so widespread, and so effective, that, despite its recent growth, the study has already past thru its

initial stages of development: at first, chief emphasis was placed on the performance of music; then, on the composition of music; and now, on the treatment of music educationally, and as an element of liberal culture. Thus, under the stimulus of a growing ideal, music education has begun to adjust itself to its environment; it has displayed a plasticity that bears eloquent witness to its inherent powers of growth and adaptation.

We come to realize, therefore, that into our still formative American systems of education, ever re-adjusting themselves to the changing needs of a nation at work on a destiny, a new and promising element has entered—a subject of study that, even in its early and ill-formed period, has exhibited so marked a power of adaptation to the needs of its environment, that we are warranted in claiming for it an important function in our educational future.

What, then (to confine ourselves to a restricted field), is the mission of music in American colleges? What are the needs to which it is designed to minister? Our reply must concern itself with the needs of the nation at large, with those of collegiate systems of education, and with those that relate to the future of the art of music itself.

The needs of the nation, to which collegiate instruction in music must respond, are those of the higher life. The period of material development has practically reached its culmination, so that we are now becoming more concerned with the conservation, than with the exploitation, of our natural resources. A new period should be at hand—a period characterized by the increasing refinement of our civilization, by a widespread growth in cultural and esthetic aspects. Mr. Samuel Isham, a specialist in the field of American painting, speaks of "the taking of a whole nation whose ideals had hitherto been purely material, intellectual, or moral, and endowing it with some perception of the beauties of art." It is such a process as this that music is called upon to facilitate. Sordid and mundane influences, commercializing tendencies—these are to be overcome by opposing to them the softening ministries of the esthetic pursuits. "You will find it less easy

to uproot faults," says Ruskin, " than to choke them by gaining virtues."

The needs of collegiate systems of education to which the study of music may be applied, are largely those of incompleteness. President Butler has outlined these five aspects of civilization: the scientific, the literary, the institutional, the esthetic, and the religious. While there is still a question as to the wisdom of including religious teaching in our college curriculums, there can be no question as to the advisability of having instruction along scientific, literary, institutional, and esthetic lines. The last of these, however, is, unfortunately, either unrepresented, or inadequately represented, in most of our colleges—and it is this deficiency that the study of music is called upon to assist in meeting. This call is becoming the more insistent, in proportion as the educational value of music is being more widely recognized. For educators are now beginning to realize that the study of an art may contribute as much, even to the general discipline of the mind, as the study of an exact science. The study of music, in its various phases, for example, may lead, not only to the acquisition of better control over the hand, the eye, the ear, the muscular and the nervous systems, but also to the development of intellectual, emotional, volitional, and imaginative powers of a high order.

The salient need of the art of music, which collegiate instruction is seeking to remedy, is the lack of general musical culture in the nation at large—a lack so serious as to imperil our musical future. The development of the art of music in America demands that the colleges provide suitable training, at least in the earlier stages, for the professional student of music, in order that he may not be denied a liberal education during the period of preparation for his profession; but it demands, *a fortiori,* that the colleges assist in spreading such an intelligent appreciation of the master-works of music as to endow the nation at large with a true musical culture—for only thus can the fertile soil be supplied, in which alone the art can thrive.

A careful study of these national, educational, and artistic

needs will clearly reveal the fact that, if our collegiate instruction in music is to be adjusted to the demands placed upon it, it must be essentially cultural in nature, and designed for the student body at large—rather than technical in nature, and designed only for the elect few. Courses in musical appreciation (this term being employed in its broadest signification) are to be the predominant feature; and the atmosphere is to be jealously guarded, in order that it may always remain esthetic, rather than scientific. Such courses of instruction may, with wisdom, be incorporated in a group of esthetic subjects from which every college student shall be required to elect—a policy which, we venture to predict, will characterize the American college of the future.

A question naturally arises regarding the qualifications of the instructor under whose direction such collegiate study of music is to be placed, in any given institution. Just as our educational formulas are determined, in general, by the needs which they are designed to satisfy, so the predominant character of the instruction to be offered and the educational environment to which it must be adapted, indicate that the directing officer in a collegiate department of music should be, in the broad sense of the word, an educator—provided, of course, he be also a musician. If, besides, he is a composer, or even an expert performer, these additional gifts will be of the greatest value: but, preëminently, he must be equipped to penetrate and to solve the insistent problems of an educational nature that beset a subject of study still in its early formative period.

This conclusion, also, is the result of an evolutionary process. In the earlier stages of music instruction in colleges, when the principal emphasis was placed on performance, the collegiate professor of music was, characteristically, an expert performer; later, as emphasis came to be placed on musical composition, the professors chosen were, in most instances, either composers or experts in musical theory; now, when the educational aspects of instruction in music are emerging, the directors of our collegiate departments of music will, naturally, be men particularly qualified to give guidance to the new impulse.

Their problems will be mainly scholastic: the determination of the various courses of study to be offered, their aim and scope, their methods of presentation, and their relative importance; the correlation of music education with the general collegiate curriculum, with instruction in secondary schools, and with the thought and culture of the nation at large; the readjustment of these relationships, from time to time, as educational systems and popular culture progress; the dispelling of the skeptical attitude toward music education, that still lingers in our prevailing educational thought—a survival of the period in which collegiate musicians were unable to command the respect of their associates in other departments; the determination of standards of excellence, and of the principles that are to guide in the awarding of credit and of degrees; the fitting of the instruction to the conditions of undergraduate life and study.

Such problems as these are entirely beyond the ken of even the most talented performer or composer of music, unless he be, at the same time, experienced in the solution of educational questions and familiar with the collegiate field as a whole. It must again be emphasized, however, that the mere educator can not satisfy the demands of the position; the successful director must be, as well, a trained musician, esthetic in temperament, sensitive to the voice of art. With such a man, both educator and musician, music will be an art scientifically taught—not, as is too often the case, a science artfully taught.

In many of our institutions, however, it is necessary that one man direct both the collegiate instruction in music and a university school, in which selected students pursue special courses designed to fit them for a professional career in music. We are led to inquire, therefore, whether the qualifications of a university director of music are, also, primarily educational. The reply is in the affirmative. All the educational problems in the field of collegiate music have their counterparts in the field of university music; in addition, there are specific questions, such as the determination of the curriculum, and the requirements for higher degrees, which demand solution by a

director in sympathetic touch with educational thought. These questions are becoming the more insistent, in proportion as our universities are adopting a policy in accordance with which the professional student of music is obliged to meet requirements of a general academic nature, as well as those of an exclusively musical nature. It is, indeed, necessary, in a university, to have a prominent composer, as well as a prominent musical educator; but the latter should be the administrator and director—unless, perchance, that *rara avis* can be found, a man both composer and educator.

The man that can accomplish most for the future of American music is the one that combines university training, esthetic temperament, and educational as well as artistic inclination, if he occupy, as a forum, the chair of music in some prominent institution. Such a man will not only be a leader in developing music education, to the enrichment of our national life and the development of the art of music; he will also exert an influence on educational thought in general, so that music education shall bear its part in determining the ideals and methods of the future. The destiny of music education involves not only its adaptation to the general body of educational thought, but also a reactive process by virtue of which our educational systems shall themselves be transformed and vitalized.

This, then, is the mission of music in colleges and universities: to assist in the development of our future art, to stimulate and improve our national systems of education, to spread culture, to uplift our American civilization, to afford another fulcrum on which Archimedes may rest his lever and raise the world.

LEONARD B. MCWHOOD

COLUMBIA UNIVERSITY

IV

THE COLLEGE LIBRARY

The world's spiritual record and its physical record are not unlike in their manner of preservation and presentation. Scattered traces on the surface or near the surface of the earth stand representatively for constructive forms of action, which went forward for long periods over wide areas. These simple facts, still bearing testimony to framing power, become sources of inference under which a conjectural method is shaped covering the world's physical history. This process is sound in the measure in which the visible facts are wisely regarded and wisely united with each other.

In like manner the libraries of the world contain a variety of spiritual experiences, which, tho scattered much at random among men, still safely stand for processes of thought and feeling and action that have taken part in human life. The histories of mankind are not thus very different in their method of construction from the theories of geology. They are good or bad, adequate or inadequate, in the measure in which they give true interpretation and extension to the actual products of the human mind. It is these that are real and are waiting for a rendering which shall fill all gaps and give full significance to the several parts. A recognition of this principle, that we reach safely the invisible by an extended study of the visible, has led to a use of libraries distinct from that which at first prevailed. The reader, at the suggestion of another or from his own limited knowledge, called for a book and it was furnished him. The volumes with which it was associated remained hidden and their concurrent lessons were not learned nor their corrections received. The safety of the books was more thought of than the instruction of the student. More frequently at the present time he is left to find his way among the shelves, and the volumes that remain as well as

those which are taken win attention, impress themselves upon the mind, and fill it with a sense of the wide activity which, in one way or another, has found play among men in the direction his own thought is now pursuing. The library has thus come to be used and studied as one whole, and to stand to the student as a medium of reaching the men and the times that have gone before him. This method, even in its weak beginnings, is one of investigation, and comes at length to lay open human life. Thus the college library in the use of books has come to accept direct and extended contact as the chief service which it can render. The student no longer regards it as a cold, cheerless crypt from which a few bones are occasionally handed him, but as a well-furnished museum, as suggestive of living things as of dead ones, and where all experiences, reaching into his own life, stand in orderly relation to each other.

College libraries are midway between those large collections which nourish the labors of a few and those popular collections which provide more for pleasure than for toil. The college library is intended to meet the wants of those who are being awakened to the magnitude of the world, and are anxious to find their way among facts which are still a confused medley. Direct and extended contact with books is becoming the universal college method, and promises ultimately to wear away the indifference, distaste, and ignorance which lie in the path of the beginner. Those thefts and abuses which go with open-handed use are after all best overcome by the larger gratification and more general interest which accompany the present method.

There is, however, one custom, growing up with this extended use of books, which tends to put upon it a new limitation, and to arrest it in its own direction. The library is broken up and divided into seminars, more or less remote from it, according to the topics and departments embraced in different courses of study. Thus philosophy, civics, art, and the various branches of science have each their own center of study, while the general collection loses both value and interest. There is closer contact with sources of instruction, but at the same time a much restricted field.

This division of the main library has obvious advantages, but serious disadvantages. It gives apparent opportunities to the departments concerned, and a more cozy, comfortable, and companionable enjoyment of them. Those in charge of the instruction have the pleasure of magnifying it, and rendering its prosperity more visible. It multiplies divisions, excites emulation, and gains a show of independence. The students feel the force of this self-assertion and are drawn to the department and to the work assigned them.

On the other hand, it weakens the general library and leaves on its shelves the books least current and of least obvious utility. It becomes a storehouse of odds and ends of volumes apparently out of date, while the living books and living interests have gathered at a half-dozen new centers. It occasions uncertainty as to where a book is to be found, makes the pursuit of it annoying, and prevents easy reference. Not only are the books of special quality to be had only at a given seminar, those of varied and wide-reaching contents wander off subject to conflicting claims. These difficulties may be reduced by duplicating copies, but are not likely to be overcome. The cost of housing books, the cost of attendance, and the educational impression of a varied and large establishment all suffer somewhat by this dispersion of effort.

Yet these are not the reasons which should chiefly determine the policy of a college. There are deeper and more important considerations. The unity of college life, already too much broken up, is still farther sacrificed by this divided attention. The unity of college life finds both expression in and nourishment at the general library. On the whole, our American method is fortunate in having a college training of suitable length and distinction interposed between elementary and professional instruction. It is a concession definitely made to budding manhood, a recognition and assumption of its opportunities which mark it as a distinct transition, a possible era in the hastening changes which sweep us onward. College life does not allow itself to be overshadowed or reduced in value by what precedes it or follows it. It stands by itself as a period of awakened enthusiasm, of wide observation and

redundant life, in which new impulses may spring up and assert control. Such a period ought not, in the name of education, to be reduced or lightly treated. The mind of the young man, coming for the first time in wide contact with the world, and yet not jostled by it, should be left for a little to contemplate its magnitude, apprehend its variety, and shape itself to its labors. Let the boat hug the banks of the beautiful river on which it is launched, float slowly onward occupied with restricted interests, and only at intervals feel the force of the midstream currents, which will quickly enough draw it in and engage it with rocks and rapids which make all other objects nugatory. It may seem wisdom to hasten the conflict, but it is not the same wisdom as that which widens knowledge, sobers the mind, seasons the muscles, and leads one to pursue rational ends rationally.

These seminars are only another phase of that process by which college life is broken into shreds, beaten into felt, and used as a wrapping for a single pursuit. Colleges have improved in variety of studies, in thoroness of instruction and in a close hold, backward and forward, on the continuity of life. But this tendency can easily go too far, and has gone too far at more than one point. We owe much to contemplation, we owe much to manhood; we need to put forth our best and most habitual efforts in the direction of assured strength and integrity. I recall an excellent woman who wished an apple tree in front of a window at which she was often engaged. She also desired that it should not obscure the view. She steadily stript away, in its stages of growth, all laterals, hoping that it would adopt the habit of a palm with its foliage at the very top. It refused the suggestion, bent back to the ground with its terminal tuft, too limber even for a whip. We must do something for the bole of the tree, the trunk that is to sustain its branches, and spread them in the sunlight.

When I was in college, appliances were very limited, instruction poor and commonplace, but these distressing facts did not destroy the value of four years; they hardly reduced it. The unity was great; the action and reaction between

classes and classmates were constant, and we stimulated and trained each other in unguided ways and by unscheduled pursuits. We regret very much the going to pieces of college life by its departments, and divisions, and elections; each instructor occupied with his own pursuits. To these separations we must add many fraternities, ostensibly establishing new kinships, but certainly wasting old ones, and making of college life little more than the fragments of a broken feast.

But this consideration, important as we regard it, is secondary to another; this division tends toward narrow-mindedness, not toward large-mindedness. Influences which either restrict the attention or leave it to a natural bias are finding entrance into our instruction in so many ways that they should be challenged at every point. The world is very broad and very abundant in fitting objects of observation. Barren as we often make it, restricted as are the lessons we are willing to derive from it, it offers everywhere the material of inquiry and reflection, combines and interlaces its topics, and urges them, in whatever direction we turn, on our attention—layers of construction, upper and under, outer and inner. We are enveloped in our weak and flickering consciousness, our restricted observation, with so much wisdom, so much accessible knowledge pushing up into the region of thought, ready to take part in the life of the individual and of the community, that we need some like catholicity of temper, some similar alertness of attention, if we would, in any worthy degree, enter into our opportunities. We remain before the unrecognized material of thought as a dusty mirror, waiting to be wiped before it can duplicate within itself and within us the revelation of order and beauty. This form of knowledge may seem to transcend us, and it does transcend us, not as for ever escaping us, but as for ever enlarging itself as we look upon it. The apprehensive use and the serviceable use of the world are different from each other. It is not necessary that we should minutely examine, part by part, the work before us in order that we may understand its structural relations in the make-up of the world. If we are to use it as material in architecture or sculpture, flaws may baffle our labor or make it worthless.

We are not to hasten forward from knowledge to art, from apprehension to action, pledging all things in the doing of one thing. An active-passive attitude of observation is to have sway with us, time to complete itself, before we rush forward to conceive and frame a realm of small devices in gratification of immediate wants. Doing should be the summation of knowing, and knowing must underlie doing as a broad and secure foundation. Our present method is to have one narrow door into our workshop, which, material brought in, is closed with the obtrusive notice, "No admission." We do not say that there is no need of this seclusion and no wisdom in it. What we do say is that we insist on it prematurely, and follow it out too rigidly. We all need—the busiest workman needs it only the more—that living inspiration which can be gotten in the open air. Large volumes of air, the atmosphere as one whole, begin at once to purify themselves, and put health foremost;—all confined air contracts impurity, and deadens the effort that is expended in it. College life should be full of the force of life, and enter cautiously those restricted efforts, characterized chiefly by what they lay aside. It has to do with those many and primitive elements of strength without which growth ceases, reaching the end of the season. Men expend their labor for that which is not bread, because they have settled too hastily what is bread.

This process of putting ourselves in connection with the unconscious and the unknown in our surroundings, allowing it to play freely upon us and training ourselves to play freely upon it, are the great achievements of college life. This is the tide which, taken at its flood, leads on to fortune. If these days of enthusiasm pass without winning this liberty we shall not gain it. We shall go to our work before the sun is up, and not return from it till the light has forsaken us.

The general library, our medium of contact with the intellectual life about us and before us, must lie open to the eye, familiar to the thoughts, and stand out in odd moments and in accidental ways as the monitor of an existence never idle, never silent, always waiting like a living spring for those single drops that come to it, far and near. It is an irretriev-

able loss to shut down prematurely this quiet flow of knowledge; long, long before the presence of the unknown in its vastness, its interlock, its pushing power, has been recognized by us.

The need of this comprehensive mind, this sympathetic temper, is seen on every side. Narrow belief, undue intensity, a non-receptive and incommunicable temper, are the hourly infirmities of man. Intense convictions remain unsoftened and unsupplemented till classes and nations and races run against each other like frightened cattle, and destroy each other in the mere waste of ignorance and fear. In each calling, each profession, there comes to be a professional temper which approaches folly, and at times borders on madness. In the practise of law, a too controlling importance is attached to legal possibilities and methods, till at length they become a convenient cloak of fraud. This is accomplished with a narrowness and yet a candor of thought quite anomalous. We come to be afraid of the lawyer in the degree in which he is true to his profession and zealous in its pursuit. The physician is often dangerous in the degree of his technical knowledge. He has undue confidence in remedies, and little confidence in hygiene; while hygiene itself, in the mind of some devotee, sinks into extravagance. We use our reasoning powers to bewilder and mislead ourselves. As body and mind are companion agents, we hit upon a faith-cure, and in the attention we give to one of the two terms, lose sight of the other. Religious belief above all discloses the narrow grooves in which the mind runs. We have an infallible faith and a devilish unbelief. There rush in upon us convictions from all points of the compass, as positive in form as obscure in substance. The rulers of a nation frequently rest their conclusions avowedly or tacitly on a doctrine of force, which thrusts aside the spiritual world and lapses into fraud and violence. The military man incloses himself in his own thoughts, and while regarding suitable arms and impregnable fortifications as the only defenses of national life, suffers them actually to become the terms of tyranny. We discover, as in the war of 1870 between Germany and France, that the military leaders

of a nation have been for months and years in a minute preparation of the means of attack, which suddenly close in like the jaws of a trap. This may at times mean success, but it means at all times intense narrow-mindedness, a hardening of the arteries of our intellectual life which utterly unfits them for activity.

In a critical presidential election, like the one we have recently past thru, what currents, undercurrents, cross-currents and conflicting currents are at work; what tendencies which those who entertain them are hardly aware of and those who oppose them fail to measure; what obscure influences, private gains masked as public welfare, and public welfare identified with personal profit, harass, distract, and scatter voters to the four winds. In all this there is one wide stretch of ignorance and of knowledge, illuminated by mere flashes of thought and waiting for some sufficient revelation.

We are not overlooking the fact that human thought is necessarily ill informed and narrow, but are urging the fact that for this very reason the largest inlets of truth are to be kept open, the most varied and habitual play of influences to be maintained, that, if may be, we may each find his own path more certainly. We have no reason to shut ourselves up when the atmosphere is already too close. We must seek every avenue of approach to the world about us, the world behind us, the men that have been, the men that are; not pushing, but finding, our way forward. We are not to "cut ourselves off from the past, but to hold, unbroken in life and death, the ties which exist for us only in history." "Love, passionate curiosity, a sympathetic tentacular sensibility,—to these all worlds, spiritual or material, past, present or to come, yield the romance of discovery." While it is quite plain, and not to be regretted, that we are forced by the practical claims of the world to bring our powers to a point, and thin them down to a cutting edge, this constitutes no reason why we should not, or, rather, it constitutes a reason why we should, lay hold of the suggestions and inspirations of the large universe to which we are united, cease to treat them as impediments to success, and regard them as central terms in any

ample fulfilment. There is a joy in the ingress of thought quite beyond daily achievement. The pleasure of accomplishment is great and may be infused with a feeling of personal powers and personal distinction, but it is not comparable with that relaxation and recreation with which one faces the whole world, of which he is so insignificant and so significant a part. This is life among the hills and mountains, whose winds blow for all, where one watches things and forces as they enter into the universal, creative process. Our knowledge, so called, is chiefly of superficies and successions. The eye and the ear give these, and little more. But our superficies must be broad, our sequences go far, if they are to be the garment of the invisible world. It is narrow surfaces and restricted events that usurp thought, and get in the way of knowledge. It is strange how many men walk into a chasm, or drop into a fissure, possest with the idea that they are about to reach the interior of things and read their ultimate inscriptions. The visible and the invisible are commensurate. We lap ourselves in the invisible, as we float upon the ocean, with a profound sense of its depth. To come out frequently at odd moments, moments touched with divine concord, into the vision of the world, is to fill our lungs with air and feel a new impulse in viscera and limb. One of the places at which, even if it be but rarely, where a pervasive joy in life may be felt, is the general library, an unmeasured expression of individual and race activity in exploring the realms of thought. The more aware one is of the largeness of this kingdom of knowledge, the less can he afford to neglect the appeals which, unbidden, may find their way into consciousness, and pierce with new windows the thick walls of custom that have been built up about him.

The one consideration, which in some sense embraces this breadth of thought and depth of feeling, is spiritual health. That life is truly wholesome which is in habitual interaction with all the world about it. The one distressing thing in human life is that it so often fails to understand itself. Yet is not this failure a testimony to its scope? The failure may be in outward form or in inward force. We guard in various

ways against the first, but are frequently forgetful of the second, the bankruptcy of the mind in its own domain. The rarest thing among men is a wide, proportionate, ever justifiable and enjoyable mode of thought. Even science does not escape the censure of headlong conclusions in its own field, and still less does it escape it when it approaches philosophy, religion, and human life. The doctrine of evolution, profoundly as it is fitted to modify thought, has, by a perverse precipitancy, taken on an extreme form quite in face of the facts with which it is dealing. Even Darwin was aware of a limitation of spiritual insight, resulting from an intense and protracted watchfulness of physical dependences.

Political economy, a quasi science, has formed and held fast its conclusions, only partially regardful of the fact that society is subject to progressive changes which may much modify the forces involved in its theories. In our commercial and in our social temper we have attached a very extreme value to accumulations of wealth as an expression of prosperity, with little inquiry as to how this wealth has been distributed, and what preparation it gives for the next stage of development. Our prosperity is constantly on the verge of financial and social collapse, and yet we are so dazzled by the sheen of commerce as hardly to observe its danger. Many of our sins are nothing more than abortions due to limited systems of thought. We accept the present at its present worth, and then proceed to match our future to it. We judge men, classes, races, by the part they are playing in our daily life, and then attempt to crowd them permanently into bounds much too narrow for them.

Spiritual health, the power to feel and appropriate all spiritual incentives, and thrive on their nutriment, is the supreme personal and social possession. The absence of it is sure to issue in one or another disease of mind, through which weariness and failure overtake us. In our time, when specialization is so extreme, when our activities and estimates of welfare are running in such narrow channels, any method is illdevised which weakens in some new way those general impressions and universal impulses by which our lives are made

full and harmonious. When our first demand is everywhere and always for sober and sufficient thought, we are in error in breaking up the one assemblage of human interests which finds expression in a large library, and parceling it out between separate heirs. This is dividing up an estate which owed its chief influence to the union of its parts. Our individualism is extreme. What we now need both to sustain and to control it is a sense of union in the output of our lives, a sense of their constant return upon themselves. What a man is, he is by and toward his fellow men, and this fellowship is the medium of his existence. Participation in knowledge is the condition of its enlargement, and as we cease to partake in wisdom we shall cease to bestow it.

JOHN BASCOM

WILLIAMS COLLEGE

V

THE INTERPRETATION OF THE COLLEGE ENTRANCE EXAMINATION BOARD'S NEW DEFINITION OF THE REQUIREMENT IN PHYSICS

On April 17 last, the College Entrance Examination Board adopted a new definition of its requirement in physics. In order that physics teachers may have the opportunity of altering their methods of teaching at once, the Board voted that this requirement should become effective for the examination in June, 1910. The new definition has been printed in full in the EDUCATIONAL REVIEW for May, 1909, and in *School science and mathematics* for June. Copies of it may be obtained from the Secretary of the College Entrance Examination Board, Columbia University, New York.

The new requirement opens a new epoch in physics teaching. Those who believe in encouraging the study of physics in secondary schools should be grateful to the College Board for thus taking the lead in the work of making this study intelligible and of both practical and educational value to all the pupils in the high schools, whether they are going to college or not. This has not been possible so long as schools were obliged to prepare some of their students under the old requirement.

The College Entrance Examination Board is also deserving of hearty commendation for the method which it employed in securing the new definition. In the past definitions of this sort have been framed by committees composed largely of college men. But the Board apparently now recognizes that the secondary school teachers—the men who are actually doing the work and who therefore understand the needs and the possibilities of the high school pupils,—are better qualified to determine what constitutes a rational requirement: for this physics

requirement was not adopted until it had been carefully revised and corrected by a committee composed entirely of "successful and experienced teachers of physics who are at present actively engaged in teaching physics in public secondary schools."

The success of the new definition is thus due not only to the effective work done by this committee of secondary school men, but also in large measure to the College Entrance Examination Board's wise and progressive new policy, which made possible the appointment of such a committee and the reference of the whole subject to it. In the acceptance without question of the report of this committee, the College Entrance Examination Board has set a precedent which, if followed consistently in all subjects, would soon solve the college entrance problem in a way that would be eminently satisfactory to all concerned. The colleges would get students better able to do college work, and the high schools would be able more effectively to serve the communities which support them.

Passing to a consideration of the new definition, let us note some of the more important innovations.

1. The first paragraph of the introduction places a minimum time-limit on the work that must be done before taking the examination. Each candidate must bring his teacher's certificate that his course in physics has included at least 120 hours of school work. The value of this restriction is evident. The concepts of physics can not be grasped over night; they must have time to grow and to become clear by repeated and varied use. This requirement insures time for such growth, and prevents the attempt to "learn" physics in two weeks solely for examination purposes.

When taken in connection with the shortness of the syllabus of required topics, this restriction opens to the teacher a large field of investigation and experiment in effective teaching. One of the most serious difficulties in the teaching of science is that of securing an adequate amount of repetition. This difficulty is not great in language work; for example, a rule of grammar may be repeated daily if desired, each time in relation to some new context. But no one has as yet devised a course in physics in which such repetition is found. Because of the

attempt on the part of the text-books and the teachers to keep pace with the marvelous growth of physics, which has resulted in a large increase in its subject-matter, the problem of securing suitable repetition has been growing more difficult each year. The result has been that current texts resemble encyclopedias, and current courses have become so overloaded with subject-matter, that the best the teacher could do was to try to "get over" as much of this material as was possible in the time allotted to him by the school. With a comparatively short list of required topics, and a time requirement, the teacher will be able to study carefully the problem of securing adequate repetition of concepts, so as to be sure of developing those concepts more clearly in the pupils' minds.

2. A second important point in the new definition is the prominence which it gives to the practical side of physics. The syllabus contains relatively few of the practical applications; and rightly so, because these applications are different in different communities. The teacher is, however, urged "to add liberally to them"; and it is certain that most teachers will follow this advice, since history shows that science has originated in a study of the means of perfecting useful devices, and the most successful teachers have found by experience that science can be made much more real and vital to young pupils if practical applications are used at the very beginning to introduce each topic.

On this point educators are fairly well agreed at present. Each individual's clear concepts are formed from his own personal experiences with phenomena, and each individual thinks clearly and definitely in terms of concepts which have been formed in this way. In other words, the materials of instruction must be concrete, and such materials are "concrete only when they deal with real things and with actual, significant situations." [1] Facts, isolated from their original association, and having now no specific function, are abstract. Hence, if the concepts of physical science are to become clear to a pupil, they must be developed from experiences which deal with real things and significant situations and which are not

[1] McMurry, *Teachers College record*, Vol. VI, No. 2, page 6.

isolated from their original associations. The current practise of beginning each topic in physics with definitions or statements of laws, instead of with concrete experiences, does violence to the normal processes of acquiring knowledge that is definite and usable.

The prominence given to practical applications is thus one of the best features of the new definition. It is certain that the skilful and successful teacher will begin each topic with a study of such of these applications as are familiar to the pupils in his particular class.

3. Another very important feature of the new definition is the omission of the absolute units. Since the heart and soul of physics is measurement, and since measurement is possible only after units have been defined, the problem of defining units is a very fundamental one in physics. In the development of physics into its present highly complex and abstract form, the definitions of the units used in its measurements have also developed slowly into their present form. When the science was young, the units used were defined in terms of those phenomena which impress human senses most forcibly. Thus weight is a property which impresses the senses in a marked way in most daily experiences. Hence units of weight were established and used long before any one ever thought of defining the unit of weight in terms of the two factors mass and acceleration.

Before steam engines were invented, work was done by horses in treadmills. As a result of this, the work that a horse could do in a certain time was an early unit of work,—a unit which still survives in our horse-power-hour. We also reckon work roughly in terms of the work a man can do in a given time, as when we say it requires two days' work for two men to build a chimney. It was a long time before the unit of work was separated into the two factors of weight and distance, and the foot-pound was introduced. This is still the only unit of work used by engineers.

The absolute units have been introduced very recently, having been developed in response to the growing demand of science for greater accuracy by a process of abstraction in

which immediate sense impressions and intuition have been pushed into the background to make way for greater rigor and more perfect logic. Teachers are apt to forget that beginners do not appreciate and are incapable of assimilating this refined rigor and logic. The appreciation of these must be developed slowly in the individual as it has been in history. The attempt to make beginners comprehend the absolute units is futile; and experience has shown that high school pupils do not, as a matter of fact, gain clear and usable concepts of these units, notwithstanding the strenuous efforts of the teachers to make them do so. Besides, of what use are they to the great mass of the pupils, even if they did learn to use them in their physics work? These units are used at present only by the professional scientists; and how many of the 125,000 students of physics in the high schools each year become scientists?

Yet quantitative work is necessary in elementary physics, since measurement is the heart and soul of that science. It is, however, perfectly possible to do the necessary quantitative work in terms of the older and more intelligible units with as high a degree of accuracy as the pupils are able to appreciate, and with a great gain in their appreciation of the value of quantitative and definite knowledge. Such quantitative work should be carried on in whole numbers, as it were. It shows far better scientific habits when a student gets as the answer to a problem twenty-two foot-pounds, even if the number is not so very accurate, than when he brings in as his result the number 3.0481723, and is unable to specify clearly the unit in terms of which the result is exprest. In the words of the new definition, " The exercises should be free from the disguise of unintelligible units."

Thus again the new definition of the physics unit shows that progress is being made. The teachers who framed it have evidently learned from their own experiences that the best results are obtained with beginners if the attempt is not made to teach in the first year the entire science of physics in its present complex form. This is a most important and significant change of front, because it indicates first: That the

course is being framed in the interest of the great mass of students instead of in the interests of the thousandth of one per cent. of them who become physicists annually; and second: That the enthusiasm among teachers for finished science and subject-matter is giving way to a desire to have their pupils comprehend and clearly grasp their work, and gain in power and efficiency thru it. Henceforth the teaching of physics will be subordinate to the teaching of boys and girls.

4. Equally commendable with the omission of the absolute units is the omission from the new definition of many of the larger theories of physics; such as the kinetic theory of gases, the theory of ions and electrons, and the electromagnetic theory of light. Theories of this type can be rightly understood by any one only on the basis of a large fund of definite knowledge of concrete facts derived from individual experiences with material things. A pupil must have clear concepts and precise ideas concerning how phenomena take place and what material things will do before he can speculate and form hypotheses successfully.

If the more comprehensive theories are presented to a beginner before he has an adequate fund of definite knowledge of concrete facts, not only is his power of framing hypotheses blunted, thereby killing his scientific imagination; but also he soon comes to regard those theories as finalities, and is then unable to distinguish clearly between facts and theories—between knowledge and belief. To be able to frame fruitful hypotheses and to distinguish between facts and theories, is of fundamental importance for scientific,—i.e., clear and definite thinking. Without this ability, progress in science would be impossible, because scientific growth depends on the creative power of hypotheses.

The current teaching of this type of theory often leads pupils into habits of what Professor William James calls "vicious abstractionism," in his significant article on a very prevalent abuse of abstraction in the *Popular science monthly* for May, 1909. Samples of this are the following: "An electron is nothing but an electric charge in motion." "Light is simply waves in the ether." "An electric current is nothing

but an electron current." Of this form of conclusion Professor W. S. Franklin says (*Science,* June 11, 1909, page 938): "As if one could be placed under obligations to understand clearly any physical fact in terms of an extremely vague hypothesis!" To a person with a mind given over to vicious abstractionism, the precise ideas essential to scientific thinking are impossible. Those who treat science in this way are but searching for the pot of gold that lies buried at the end of the rainbow.

5. A final important point in the new definition is the statement which immediately precedes the syllabus of required topics; namely, "It is expected that the teacher will arrange these topics in such order as to suit his individual needs." It is to be hoped that every teacher will take careful note of this statement before reading the list of topics. If it were not for this statement, it would appear that the syllabus simply stamped into fixt form current unfortunate practises. Because of this statement, teachers will be able to experiment and to make progress along the lines just suggested.

In closing, a few suggestions as to how the order of topics might be changed to make the teaching of the subject more successful will be added. The order of the syllabus is unfortunate wherever definitions and laws come first and experiments and applications after. For example, the first section reads: Metric system, Linear measure, units: meter, centimeter, etc. It is far better for the student to introduce these definitions when a need for making a measurement appears in the process of solving some problem or of settling some questionable point in the discussion. Only thus will the definition be concrete and the concept it embodies clear.

Section II A reads: Pascal's law of fluid pressure. The hydraulic press. For the reasons just given, the order might better be reversed. The law must come out of the experience, and not the reverse. In like manner, the topic: Conservation of energy, occurs in the middle of mechanics; whereas no student can appreciate it as a scientific conclusion until he knows something of heat and electrical energy and their interrelations. Presented early in the course, it becomes to him

a dogma to be accepted on authority instead of being a well-substantiated hypothesis of great fertility.

The first topic in heat is: Heat—a form of energy. This conclusion ought not to be reached until the student has drawn from concrete experience a large fund of information about the properties of heat. In light, in like manner, the first section is: Definitions: Light, luminous bodies, etc. A much better order would be: The pin-hole camera, rectilinear propagation of light, the eye, the photographic camera, refraction, etc. If only we teachers could get a realizing sense of how injurious it is to the scientific spirit of our pupils to be forever telling them what is right and what wrong in science, immediate improvement in our work would result. Pupils should gain from their study of science a habit of framing and testing hypotheses for themselves, but we are constantly breaking up this habit by too quickly telling them things they should find out, and correcting their supposed mistakes from the point of view of current scientific theory.

The syllabus also contains some topics which should be treated only qualitatively or else omitted entirely. The teacher may, however, transfer the quantitative treatment of these topics to the end of the course, omit it entirely for those who are not going to college, and cram those who are preparing for an entrance examination on it at the last minute. Since experience has shown that the high school pupils can not assimilate the quantitative treatment of these topics, the order just suggested will meet any quantitative requirement with a minimum of injury to all concerned. "Getting over" the quantitative treatment just before examination will also increase the college-bound pupil's chances of passing.

The most important of the topics that may to advantage be handled in this way are: Mass, density, Newton's laws of motion, force (as ma), momentum, uniformly accelerated motion, falling bodies, relation of weight and mass, law of universal gravitation, absolute zero, relation between direction of current and lines of magnetic force, direction and magnitude of induced electromotive force, electrification by induction.

Because of the omission of the absolute units from the syllabus, we may infer that the omission of the quantitative treatment of force (as mass-acceleration) and of Newton's laws of motion is to be permitted. If the majority of teachers will interpret it in this way, a great step in advance will have been made. The number of hours that is annually wasted in attempting to teach the quantitative side of the topics in the last paragraph is appalling. It is to be hoped that teachers are now ready to follow the advice of Professor Edwin H. Hall of Harvard, when he says: [2] "I should have been perfectly willing, in my capacity as a college teacher of physics, to see all reference to the quantitative aspect of Newton's laws of motion excluded from the revised physics requirement of the College Entrance Examination Board. But the school teachers of physics have ruled otherwise, and accordingly we are still concerned, in associations such as those meeting at Hartford, to find the most profitable exercise dealing with the facts and laws of acceleration." And again: "I gave the inclined plane method (of finding the accelerating action of a uniform force) a painstaking trial for two or three years; but it was finally cut out, not so much because my pupils could not get satisfactory measurements of distances traveled in one, two, or three seconds, as because we could not make profitable use of such data when we had them. Let the teacher who thinks of setting up such an exercise as that here alluded to, or any other giving like results, assume that his pupil has found the distances correctly. What is to be done with them? We can show the pupil that, if acceleration has been uniform, the distances for one second, for two seconds, for three seconds, etc., must be in the ratios of one, four, nine, etc. Suppose that he applies this test and finds that his measured distances do have these ratios. What have we learned? That the center of a ball rolling down an incline, under the conditions here existing, has uniform acceleration. Is this result sufficiently instructive to justify the time and care that have been given to the exercise? I think not. Such was, and still is, my conclusion after some years of trial."

[2] Report of the joint meeting of the Physics Club of New York and the Eastern Association of Physics Teachers, April 24, 1909, p. 36.

Had the committee applied Professor Hall's criteria to all the topics in the syllabus, I am sure some of the objectionable ones would have been omitted. When you have the result, what is the student to do with it? What has he learned? Is the result of sufficient value and use to the pupil, not to the physicist, to justify the time and effort that must be expended on it? Are there other topics that would give the pupil larger educational returns for the same time and effort?

At the meeting of the Department of Superintendence of the National Education Association in Chicago last February, Professor J. L. Meriam suggested four principles to guide in the selection and arrangement of the content of a curriculum. In the hope that physics teachers will make constant use of them in framing their individual courses, as they are free to do under the new requirement, I will in closing quote them.[3]

1. That content has a place in the physics course which meets real, present needs of the pupils.

2. Only that content has a rightful place, in the study of which the pupil has a conscious motive.

3. Only that content may be admitted which the pupil can comprehend and the significance of which he can appreciate.

4. Only that content may be admitted which contributes to the continuity in the development of the special problem being studied.

C. R. MANN

THE UNIVERSITY OF CHICAGO

[3] Proceedings of the Department of Superintendence, 1909, page 17.

VI

A NEW METHOD OF ADMISSION TO COLLEGE[1]

When I heard the secretary read just now the minutes of the 160th meeting of this organization, and when I recalled the subject upon which I have been asked to speak briefly and informally this morning, I felt moved to paraphrase a familiar line of Horace, to the end of suggesting that, while we have changed our date, we have not altered our problem. I am one of the very few persons in this room—there are not more than two or three, I think, at most—who recall the meeting at which this Association was organized. It was organized for the express purpose of considering the question of college admission and the problems relating to it; I find now, by the terms of your order of business, that you are still dealing with that problem today. It would not be fair, however, for me to infer, or to permit you to infer, that no progress has been made in regard to this matter during the past eighteen or twenty years. As a matter of fact, we have progressed far more rapidly and in a far more healthy direction, than I, for one, should have ventured to hope when you first came together in this Schoolmasters' Association.

Moreover, this particular body has taken a very leading part in what has been done. Those of you who have come into this Association in recent years may not be familiar with the early committees and early reports by which the scholarship and experience of the schoolmasters of this city and vicinity found expression in ways that have since commended themselves very widely to colleges, and that have helped to bring about new relations between colleges and schools generally.

There is nothing that I could say about this subject in a

[1] Stenographic report of an address before the Association of Schoolmasters of New York and Vicinity, April 24, 1909.

technical way that you do not already know; because many of you are brought face to face with its technical details every year. Therefore, I shall confine myself to speaking about some general principles which underlie the problem of college admission, and which are now coming to be more or less clearly understood.

In the first place, let me remind you of the extreme difficulty of the problem of college admission, owing to the condition in which our American education finds itself. Before one can secure the consideration of any of these large educational questions in the public interest, he must first instil into the minds of those who control the policies of a given educational institution that it exists primarily for the public service. Not a few colleges have considered themselves and still consider themselves entirely private institutions without any accountability to the public interest or to public opinion, no matter how many students they have, or how large the endowments they control. They choose to think that they represent some particular type of education, and they feel compelled to stand for that type or ideal, come what may. As a matter of fact, they do not stand for any particular type or ideal, except selfish lack of public spirit, and incapacity for coöperation. We have all of us seen a great deal of injury done to secondary school work by individuals who hold positions of influence in the college service, and who have resisted the invitation of schools to coöperate in working out their common educational problems in ways that would serve the largest public interests.

Very great progress has been made since this Association was organized, however, and it has been made chiefly thru the establishment of the College Entrance Examination Board, which this Association was influential in founding, and has been influential in conducting. It was obvious that if we were to go forward in regard to this question, we must at least progress to the point where the schools and colleges should be brought to understand that they have a common problem. We have now gone so far as to secure thru the College Entrance Examination Board not only a single uniform system of college admission examinations, held all over the

United States; not only a single uniform system of reading and rating the examination books of candidates; but we are able to do these things by the coöperation of school and college teachers. Moreover, by this same coöperation we are now able to secure revision and simplification of the definitions of subjects or topics on which examinations for admission to college are set, in the interest of better secondary school organization and teaching.

A striking, and what seems to me a rather dramatic, incident in this regard took place in this city just one week ago. You are all aware how unsatisfactory the definition of the college entrance requirement in physics has been for many years. You know how unfortunate it was alike in its emphasis and in its details. You know how urgent were the influences that led to its original formulation and that it was accepted because any uniform definition of physics seemed better than no definition at all. The complaints against it were so emphatic and so widespread, particularly in the Western States, that the College Entrance Examination Board two years ago secured the appointment of a committee to revise that definition and to bring it into a more satisfactory condition. A year ago it appeared that this committee could not agree upon a unanimous report, or, indeed, upon any report. The matter was farther considered, differing views began to be harmonized, and it was finally agreed that the proposals of the committee should be referred to a commission of six secondary school teachers, and that all parties in interest would abide by whatever determination these six secondary school teachers might reach. They arrived at a unanimous conclusion, and on Saturday last their report was adopted by the College Entrance Examination Board. In other words, there is now to be a great change in an important subject of secondary school study, and an important subject on which college admission examinations are set, which change is the result of study and conference on the part of both college and secondary school teachers. It yet remains to be seen whether what the six representative secondary school teachers chosen from New England, the Middle States, and the West, have agreed upon is

satisfactory from the secondary school point of view; and whether it will work for good or for ill. But at all events we have hit upon the right way of dealing with these problems, a way which draws the colleges and schools together as each new problem is approached and its solution attempted.

Admission to college is not a problem of secondary schools alone. It is one part of the problem of the education of a human being, in the solution of which the secondary school plays an influential part, but by no means an isolated part. I use the word human advisedly. We have become accustomed to depend too much upon machinery, on formulas, on rules and routine, and, according to my thinking, one of the first steps to be taken in order to carry our work forward more satisfactorily is to bring back the human element much more largely than is now the case, into the problem of transferring students from one type of school to another, from secondary school to college, and to treat their progress in this respect as normal and uniform, and not as resembling a transition from an earthly to a celestial sphere. There are two views held nowadays about a surgical operation. One is that the operation is a thing apart, to be considered and treated as an end in itself; the other and wiser view is that a surgical operation is but one stage in the general treatment of a diseased condition, and that it is but one part of a process which properly begins before the operation is undertaken, and which continues for some time after the operation has been successfully concluded. Just so there are two views of the college admission examination. The first and incorrect view is that it is an end in itself, an abnormal and extraordinary undertaking; the other and correct view is that it is but part of the normal and continuous progress of the pupil in his task of gaining a formal education.

It is necessary that we should bring ourselves completely to this second point of view, from which the transition from school to college is not regarded as a change of educational state, but merely as a step, natural and simple enough, in intellectual and moral development. It so happens that our system of educational organization divides the work of the pupils

at the adolescent period between two institutions, the secondary school and the college. It is, however, an error of the first magnitude to suppose that because of this division, which does not correspond to similar divisions in other countries, some profound intellectual and moral change takes place when the pupil crosses the line which separates the one type of institution from the other. If there is any such profound change I should like some one to point out the evidence for it; because, after twenty-five years of observation, I have not been able to find it. It is important, then, that this transition from school to college should not be elevated, either in our thought or practise, into a position of false prominence, out of all proportion to its true educational importance, and to the just relation which it occupies to the training which has preceded it, and to that which will follow it.

In bringing about this transition from school to college, it is important that we should deal with it as a human problem. We should take into consideration not only the individual's scholastic achievement, but his temperament, his home environment, and such hopes and plans for future life as are already forming in his mind, or have perhaps been formed for him. It is this human aspect of the problem which most interests me, and I wish in particular to tell you what we are now proposing to undertake at Columbia in this regard. We think we are at work upon the application of a sound educational principle, and we shall be only too glad if our example is widely and speedily followed by other colleges.

By way of precaution let me say that in the vigorous discussions that have gone on for many years as to the relative value of admission to college by examination and by certificate, I have steadily opposed the extension of the certificate system. I know only too well the abuses to which it leads; the kind of pressure to which it forces school officers to yield; and the utter futility of such systems of school inspection as have yet been devised, as a protection to the colleges against the acceptance of certificates from incompetent and inadequately equipped schools. Even if I did not feel strongly the disadvantages of the certificate system, I should not be willing

to give up the college admission examination; and for the reason that one of the most useful exercises that a human being can ever be trained to, is to do what is hard and distasteful for him. In practical life we are called upon to do this sort of thing all the time. When the college teacher is told by parents and school-teachers that secondary school pupils are nervous, that they have never been in a given examination room before, that the weather in June is apt to be hot, and that the subjects succeed each other with extraordinary swiftness, the proper answer is that, however much one may regard all these things, the sooner that school children become accustomed to work under these unfavorable conditions, and under conditions which subject them to a nervous strain, the better. This is what adults are doing all the time, and by sixteen years of age it is time that a child had some little taste of it by way of preparation. This experience may be hard on pupils, but it does them good. Disadvantage only begins to accrue when this college admission test, held under conditions which must of necessity surround it, is treated by the college as an end in itself, as standing in no relation to the pupil's school work, and as that by which alone he must stand or fall in his candidacy for college admission. It is just at this point that we at Columbia think we are making a new and helpful departure.

We have discontinued the separate committees on admission, which have heretofore past upon the applications of students who desired to enter either Columbia College, Barnard College, or the Schools of Applied Science. We have united these three committees and their work in one body, to be known as the Committee on Undergraduate Admission. This committee will have jurisdiction over all questions relating to the admission of any student who comes to Columbia University for undergraduate work of any kind whatsoever. To the chairmanship of this committee an officer has been appointed of professorial rank, with no other present duties. Instead, therefore, of having to deal with the important questions of college admission in such spare moments as he can steal from classroom work, this chairman

will be able to devote his entire time and thought to this one problem. We propose to have him make the personal acquaintance of the principals and classroom teachers of those schools which are in the habit of sending us students. We propose to have him come into personal touch with schools and teachers, to know as much as possible of their point of view, and of the way in which their work is planned and carried on. We wish to have him become familiar with those schools in which students gain some particular advantage, because of the way in which some special influence is brought to bear upon their intellectual and moral development. Then we propose that when our committee weigh the question of admitting or rejecting a student, they shall not be guided simply by the mark or grade that he gets at the college admission examination, but that weight shall also be given to his secondary school record as that is written in the books. No good teacher uses the term or annual examination as the sole test of his pupil's progress. He weighs in connection with the results of the term or annual examination the record of the pupil's work in the classroom or laboratory, day by day, and week by week. We propose to apply this same method of procedure to college admission. We shall not permit schools to certificate pupils to us as qualified for college admission without examination, but we shall ask schools to give us transcripts of the record of their pupils, in order that consideration may be given to these records, together with the results of the college admission examination.

In other words, without surrendering the great educational advantage which we believe the college admission examination has, we propose to put that examination in its proper place, to give it its just proportion in weighing the question of fitness to undertake college work. You will at once observe that if we can bring about this change we shall have very much altered the importance of the student's rating in the college admission examination, and we shall have been able to relieve him to that extent of some portion of the strain which unfavorable and strange surroundings put upon him, without in any way diminishing the educational value of the examina-

tion. Moreover, we shall be exerting our influence to put the college admission examination itself in its proper place in the mind of the secondary school teacher, and in the mind of the student. Both teachers and students will come to see that the college admission examination is not something apart from the ordinary school work, something to be crammed for and prepared for by tremendous and special effort, but that it is simply one exhibition of the pupil's knowledge and power by the side of which will stand the record of his whole performance during his secondary school education. It is obvious that under this plan a student who has obtained a very excellent school record for three or four years, would have to make a pretty poor exhibition at the college admission examination in order not to be admitted. A student with a bad school record would have to pass a very excellent examination to get in. The average student would probably not do so very differently at the time of examination from what the record of his school work would lead one to expect. Every teacher is familiar with the so-called examination fiend, the student who can always pass examinations better than any one else, who possesses that peculiarly tenacious type of memory which enables him to make an admirable performance under difficult conditions. Such a candidate would have by the side of his examination record the record of his performance at school over a period of years. Both together would not be likely to mislead the Committee on Admission.

In addition to that, we propose that, in all doubtful cases, before a decision is arrived at, either in the affirmative or the negative, there shall be a personal interview between the candidate and the chairman of the Committee on Undergraduate Admission. It is our plan that the student whose case is in doubt shall be actually seen and talked with by a university officer, in order that some sort of opinion may be formed of his personality and attainments. He can then be advised whether he ought to accept admission to college under severe conditions, or go back to the secondary school to spend another term, or another year, if necessary, in order to prepare himself more thoroly for the work of college or the scientific

school. If by this means we can get a system under which both the examination and the school record are used to determine the desirability or fitness of a student for admission, and add the provision of a personal interview or inquiry in all doubtful cases, we shall have gone far forward in introducing what I call the human element into the solution of this problem. Candidates for college admission would no longer be regarded as mere numbers or letters, to be recorded on a tabulated list by the terms of some hard and fast rule.

In order that we may not allow this human element to escape us, we are also proposing that this Committee on Undergraduate Admission shall keep in touch with students after their admission, in case there is any reason for doubt as to the satisfactory character of their progess. A boy may be ambitious and genuinely anxious to succeed, but yet may not be able to adjust himself to his new environment without help and counsel. If he were still in school he would be advised and helped about all such matters. On the other hand, it is the habit of the college to-day to treat this side of the boy's nature as quite alien to it, and to leave him to trust to luck or to his own unaided resources. Under these circumstances where one boy makes the most of his opportunities, two boys fail to do so. We are going to ask our committee to try to follow these students personally and earnestly, with a view to helping them where they need help, advising them where they need advice, and in general starting them with sure foot on the right way to take advantage of the college course. If we can accomplish all these things—and we are going to try hard to do so—I think we shall have made no small contribution toward the final solution of the problems of college admission. We shall have found a way to remove many criticisms which are now urged upon the results of the examination system pure and simple; but most important of all, we shall have changed the opinion, both of the college teacher and of the school teacher, as to the character of the transition from school to college. We shall have helped to make it appear a normal and ordinary occurrence, not an extraordinary and cataclysmic event.

There is another aspect of this matter about which I wish to say a word. We used to have at Columbia, and I suppose most other colleges had or still have the same thing, a system of deciding upon the results of college admission examinations on a purely mathematical and formal basis. Every boy who had complied with the minimum requirement was accepted for admission and substantially everybody else was rejected. It became evident to some of us that this was not sound educational practise, and we found a great many parents and a great many school teachers who held precisely the same opinion. At that time I was so fortunate as to be a colleague on the college faculty of the late Professor Price. Largely at his initiative and owing to his influence we relaxed the rigorous application of the printed rule and endeavored to show some appreciation of the human element in the problem of college admission. We found a good many boys who had not quite fulfilled the minimum requirements who, nevertheless, when once admitted to college, made excellent students, sometimes the very best. Then it dawned upon us that our mistake consisted in endeavoring to use, as a final and absolute test of fitness to enter college, an examination which was not entitled to have any such preponderant weight. We discovered that by the strict application of our form of rules we would keep out of college almost as many good and well prepared students as we would let in. In other words, if a college fixes a hard and fast entrance requirement and rejects every one who does not comply with it strictly, that college will do as much damage to education as if it had no standards at all. Human beings can not be measured as to their attainments by the laws of mechanics. They must be measured by laws which spring from human nature itself. The real way to deal with these candidates who in some measure fall short of the minimum requirements is to say, for instance, in some cases, "You are not ready to come to college. If we admit you, we know you are going to be burdened with your work. You will probably fail in the examinations of your Freshman year. You will have neither pleasure nor profit in the work of that

year. It will be intellectual economy for you to go back to a secondary school for another term or year, and to take up once more there the subjects in which you appear to be weakest." In other cases it may be wise to say, "It is true that you have not entirely complied with our minimum conditions of admission. Nevertheless, you are in good health, your school record for four years past is satisfactory; it is not bad even in those subjects in which your examination is pretty poor. Therefore, we feel that there is reason to believe that you can probably do yourself justice in college, making a creditable record. We are going to give you a term or a year to prove whether we are right or not." In this way, without in any particular lowering the standards of admission, we apply those standards so as to improve educational conditions and not so as to do them damage.

One of the most important changes that has come over the American college has gone hand in hand with the steady widening of its constituency. When the American colleges were young, indeed when some of them were old and substantial, there were very few boys who went to college without a serious, definite purpose. They were looking forward to the ministry, to teaching, to law, or to medicine; not many of them looked forward to merchandizing or to finance. This condition is now entirely changed. It has become fashionable to go to college, at least to some colleges, and a great many boys are now going to college each year who, I am convinced, get more harm than good from their college residence and college life. This new type of college student goes to college primarily for a social purpose. He desires to share in the attractive associations of an American college. He desires to participate in athletic sports. Not infrequently he is looking forward to becoming eligible for membership in the University Club of his native town. It is, on the whole, a good thing that boys of this type go to college, provided the colleges will recognize their existence as a type and will deal with them accordingly. The mistake that has been made is in treating this new type of undergraduate, in judging him

and testing him by the same academic standards and academic methods that have been developed for the serious minded student. When this happens, only one of two results is possible. You must either let down your whole standard of scholarship to meet the capacity of this rapidly growing element of the college population, or you must bring up the performance of this new element to the traditional standards set for serious minded men. Neither of these results, however, is either wise or in the long run practicable. The real escape from the dilemma is to learn the lesson taught by the University of Oxford, which is to draw a distinction between the treatment and the prestige accorded to those who come to college as serious minded students and those who come to college for the sake of the incidental social benefits which the college has it in its power to confer. Oxford has long distinguished between the candidate for the pass examination, and the candidate for the honors examination. I hope that the day is not far distant when we at Columbia will apply the principle underlying this distinction to our American conditions. Let the new type of student come to college, if he will, but say to him distinctly at the outset, you must subject yourself to the discipline of proved value which is offered in this particular curriculum. If you will pursue those studies satisfactorily and stay here four years, conducting yourself like a gentleman, you may be graduated with a pass degree. On the other hand, let it be said to the scholar, here is the full, rich opportunity of modern science and modern literature spread before you. We will do the best we can to seek out and to help you express your native capacities and preferences. We will allow you to combine in any practicable fashion the studies which interest you, and in which you prove yourself successful, and which enables you to grow intellectually and morally. We will lead you on to graduation with honor and distinction, and give you a special crown or palm of scholarship. When the colleges generally recognize this distinction and act in accordance with it, they will have adjusted their methods to the changed con-

ditions of the twentieth century and will silence much of the criticism now raised against them.

After all, this again is merely the introduction of the human element into the life and work of the college, and it is this human element that we are seeking and have need for not only at the time of college entrance, but thruout the college course. We are constantly making headway despite the many and dolorous voices that rise on every side of us to urge contrary opinion. When you remember how far we have come in twenty years, you will perhaps agree with me that it is not unreasonable to believe that we are approaching the time when every college authority will realize that the college entrance examination is not a boundary between two strange and alien educational territories, but rather a bridge, well and helpfully guarded, over which those may pass who go from one friendly field to another. The introduction of the human element into the administration of college admission requirements and into the college admission examinations, is the way out of our difficulties. In the creation of the committee whose existence and functions I have described, we at Columbia have done the best we know how to do toward accomplishing this end.

NICHOLAS MURRAY BUTLER

COLUMBIA UNIVERSITY

VII

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VIII

DISCUSSIONS

PRONUNCIATION OF LATIN

The Classical Association of England has been dealing vigorously for some time past with the subject of the pronunciation of the Latin and Greek languages as taught in the English schools. The Board of Education has recently been induced to issue a circular on the pronunciation of Latin which in substance supports the recommendations of the Classical Association. For its general interest to classical teachers in this country, the circular is here given in full as follows:

The serious inconveniences that arise from the want of a common and fixt system of pronouncing Latin in schools are generally admitted. They have in the past gravely affected the efficiency and success of the teaching of Latin. In some cases the system in use was demonstrably erroneous, and in others there was no consistent system at all, or different systems were in use in different forms, with the result of much confusion, much needless labor, and positive encouragement to slovenliness and inaccuracy.

In order to remedy these evils, it is necessary that a uniform system of pronunciation should be adopted thruout the Latin classes in each school, and almost equally necessary that a common system should be adopted in all schools in which Latin is taught.

To effect this object, the Board recommended two years ago that the scheme of reformed pronunciation adopted by the Classical Association and approved by the Philological Societies of Oxford and Cambridge, the Headmasters' Conference, the Incorporated Association of Headmasters, and the Assistant-masters' Association, should be brought into use in all schools recognized by the Board. From returns made by the schools it appears that this system has been generally adopted, and is now in use in all but about five per cent. of the schools in question.

The rules of this system (excluding certain unimportant or debatable points which hardly affect ordinary usage) are set forth below.

If the authorities of any school still prefer to adopt some other system of pronunciation, or to make any modifications in the system here recommended, that system must be clearly explained when the curriculum is submitted to the Board. In no case can the use of any system be sanc-

tioned in which proper attention is not given to quantity; in which, for instance, *păter* is pronounced as *pāter, līcet* as *līcet, bŏnus* as *bōnus*. Latin will not be considered to be efficiently taught where quantity is ignored, nor will any teacher be considered qualified to teach Latin who is not sufficiently acquainted with the rules of Latin quantity to read Latin prose and verse correctly.

Special attention should be paid to the teaching of pronunciation in the lower forms. A reasonable discretion may be used in changing the pronunciation of pupils who have already for some time been learning Latin on another system. But it is obvious that a teacher can not use two different pronunciations when teaching two classes or sets of pupils without great trouble and almost certain confusion, and, in view of the fact that a standard pronunciation is likely to become within a few years practically universal, it is very desirable that, even at the cost of some temporary additional effort, pupils should become accustomed to its use as early as possible.

Rules for the pronunciation of Latin

Quantity

In pronunciation the quantities of the vowels must be strictly observed: *e.g., lăbor,* not as English *lābour; mīnor,* not as English *mīnor; nŏta,* not as English *nōte*. This is essential for the proper appreciation in verse of meter, and in both prose and verse of sound, rhythm, and distinctions of meaning (*e.g., lăbor,* I glide, *lăbor,* toil; *lēgo,* I bequeath, *lĕgo,* I pick; *līber,* free, *lĭber,* a book; *sōlum,* only, *sŏlum,* ground).

Vowels

The following is approximately the pronunciation of the vowels:

ā (fātum), as *a* in *fāther,* not as in *plāy*.

ă (răpit), the same sound shortened, as the first *a* in *a*ha.

ē (mēta), as *a* in *fāte,* not as *e* in mēte.

ĕ (frĕta), as *e* in frĕt.

ī (fīdo), as *ee* in fēēd, not as *i* in fīne.

ĭ (plĭco), as *i* in fĭt.

ō (nōtus), as *o* in hōme.

ŏ (nŏta), as *o* in nŏt.

ū (tūto), as *oo* in fo͞o͞l, not as *u* (yoo) in acūte.

ŭ (cŭtis), the same sound shortened, as *u* in f*u*ll, not as *u* (yoo) in accŭrate, nor as *u* in shŭn.

y only occurs in words borrowed from Greek, and corresponds, not to any vowel-sound ordinarily used in English, but to French *u* or German *ü*.

Diphthongs

The sounds of the diphthongs may be arrived at by running the two component vowel-sounds rapidly together, the second being pronounced lightly. The most important are:

ae (portae)=a͡e, nearly as *ai* in Is*ai*ah (broadly pronounced), not as *ay* in plāy.

au (aurum) = a͡u, nearly as *ou* in h*ou*r, not as *aw* in *aw*ful.

oe (poena) = o͡e, nearly as *oi* in b*oi*l, not as *ea* in d*ea*n, nor as *ay* in plāy.

Diphthongs of rare occurrence are ui, eu, ei, which are similarly to be pronounced as u͡i, e͡u, e͡i, or nearly as in English s*weet*, n*ew*, gr*ey*.

Consonants

c, g, t, s are always hard.

c (cepi, accepi, scio), as *c* in *c*at, *cc* in Mala*cc*a, *sc* in *sc*andal, not as in acid, a*cc*ept, fas*c*inate.

g (gero, agger), as *g* in *g*et and *gg* in ra*gg*ed, not as in *g*in or exa*gg*erate.

t (fortis, fortia), as *t* in native.

s (rosa, res), as *s* in *s*it, thi*s*, not as *s* in ri*s*e.

In accordance with this rule, -ci-, -si-, -ti-, *e.g.*, ocius, sponsio, natio, are never to be pronounced like *-sh-*, as in appre*ci*ate, respon*si*ons, na*ti*on.

i and u consonantal.

i (j), *e.g.*, iacio (jacio), as *y* in *y*ou, not as *j* in *j*am.

u (v), *e.g.*, uolo (volo), practically as *w* in *w*e, not as *v* in *v*ery. But the latter pronunciation may be adopted if preferred.

r is always trilled, even in the middle and at the end of words.

When a Latin consonant is doubled, both should be pronounced: *e.g.*, vacca and pullus are to be pronounced vac-ca, pul-lus, as in English boo*k*-case, oi*l*-lamp.

CONTRIBUTIONS TO THE HISTORY OF AMERICAN TEACHING

I

Superintendent Greenwood of Kansas City has furnished the following list of words given by Mr. Joseph Dennis, County Superintendent, to about forty teachers in a spelling contest held at Kirksville, Adair County, Mo., in April, 1868. The contest was open to all teachers, and the words were pronounced by the County Superintendent, but not defined. The prizes offered were Webster's *Academic dictionary*, Porter's *Chemistry*, and a small edition of *Tennyson's poems*.

Mr. Greenwood spelled ninety-nine words correctly, his only mistake being in the word kaleidoscope, in which he transposed the *e* and the *i*. A woman teacher spelled ninety-eight words correctly, and a man followed with ninety-seven. Following is the list:

List of Words

1. abacus
2. abalienation
3. abscission
4. acacia
5. acerbity
6. barouche
7. belles-lettres
8. bissextile
9. bronchocele
10. cabriolet
11. calendar
12. caoutchouc
13. cerement
14. coup de grace
15. cuisine
16. dénouement
17. dudgeon
18. eccentricity
19. ecstasy
20. elision
21. esculapian
22. factitious
23. finale
24. fratricidal
25. fugacity
26. fustian
27. gallinaceous
28. gauger
29. geocyclic
30. gerrymander
31. geyser
32. gnarly
33. gneiss
34. groat
35. gyroscope
36. halcyon
37. hautboy
38. heinousness
39. hemorrhage
40. hors de combat
41. hydrargyrum
42. ichneumon
43. idiosyncrasy
44. immersion
45. intercede
46. irascible
47. isthmus
48. jeu d'esprit
49. judiciary
50. jugular
51. kaleidoscope
52. keyed
53. killikinick
54. knaggy
55. knuckling
56. lachrymose
57. lacquer
58. laocoon
59. laryngitis
60. lattice
61. leisurably
62. leprosy
63. liege
64. liquefy
65. lucre
66. macerate
67. mackerel
68. millinery
69. mint-julep
70. minié-ball
71. miscegenation
72. muscle
73. neuralgia
74. nonchalance
75. onerous
76. pachyderm
77. paroxysm
78. pentateuch
79. phthisis
80. pleurisy
81. precipice
82. quintessence
83. quizzer
84. raisin
85. recession
86. regurgitate
87. sacrifice
88. sassafras
89. schist
90. sesterce
91. Sisyphus
92. strychnine
93. Terpsichore
94. tessellation
95. therapeutics
96. tyrannize
97. uxoricide
98. vaccinate
99. vesicle
100. zinky

TEACHING PEACE THRU INSTRUCTION IN AMERICAN HISTORY

To the observer of important world movements today, two antagonistic groups of phenomena present themselves. One has to do with the interests of international peace and goodwill; the other with the stupendous preparations for war. Such highly civilized countries as England and Germany, for example, are imposing overwhelming financial burdens upon themselves in order to build up their armies and navies. To such an extent have jealousy, fear, and suspicion seized them that in wild panic they rush to build Dreadnoughts and otherwise increase their fighting strength. The claim is that great armaments are absolutely necessary for the preservation of peace, altho it is plain that such preparation for war invites national bankruptcy. On the other hand, organizations like the Inter-Parliamentary Union, the Hague Conference, and the five hundred peace societies of the world are moulding public opinion in favor of a new international spirit.

Out of this strange situation good is certain to come, for while it is scarcely probable that war between two such great countries as Germany and England will occur, the actual conditions are causing the people to reflect upon the folly of spending untold millions on their armies and navies, and are forcing men to think as they have never thought before about the barbarous method of settling international disputes by the use of brute force. Ideas are growing into ideals and convictions, and these in turn are rapidly finding embodiment in organized action. Important among the organized forces is the American School Peace League, which "aims to secure the coöperation of the educational public of America in the project for promoting international justice and equity."

School superintendents can do much to further the work of developing a peace-loving spirit among school children, and to this end no branch of instruction lends itself so well as does American history. For the United States stands for the grandest experiment of all times in the development of Christian democracy. In teaching history, therefore, less emphasis

should be placed upon wars. Of course they should receive attention, for they have played an important part in racial and national evolution. But the significant things about them —and the only things that should properly have any consideration in the school—are their causes, their results, and the spirit and method in which they were carried on.

For example, slavery was without doubt the underlying cause of the Civil War. Geographic and economic conditions should, therefore, be discust to explain why slavery flourished in the South and not in the North. Then the relation of slavery to state rights and secession should be made plain. It should be understood that Lincoln's great purpose was to save the Union and not to destroy slavery. He saw clearly that secession, carried to an extreme, would result in as many weak, petty countries as there were states federated together in a mighty political family. Furthermore, the federation of states foreshadowed then as it does now the federal nations of the world; our national Congress the congress of the world; and our Supreme Court the permanent international tribunal. These great embodiments of the coöperative spirit in political life have been of the highest value to our own country and have reacted powerfully upon the international sentiment of the world. In laying emphasis, therefore, upon these facts, the school can do much for the cause of international peace.

Only a limited amount of attention should be concentrated upon campaigns and battles, for we are not preparing the pupils for military life, but for useful citizenship in an orderly community.

Much should be made of the destructive effects of war. It disorganizes industry, raises the cost of living, and causes an awful waste of material wealth and human life. Said General Sherman in a report of his Georgia campaign, "I estimate the damage done to the state of Georgia and its military resources at $100,000,000, at least $20,000,000 of which has inured to our advantage, and the remainder is simple waste and destruction." Well did he afterwards declare, "War is hell!"

The drain of war upon the national resources may be em-

phasized by the fact that we have not yet finished paying for our wars. Our pensions have in the past ten years cost an average of more than $140,000,000 annually. In 1908 our taxation for pensions was nearly $154,000,000, while in the same year we paid for the maintenance of the army $111,000,000, and for the navy $119,000,000, a grand total of $384,000,000 credited to the army and navy account. Nearly two-thirds of our entire revenue are expended upon wars past and anticipated. Moreover, this material loss suggests untold suffering, which we must take into account in any attempt to measure the disastrous effects of war. For instance, if we count those who were slain on the battlefield in the Civil War, and those who died from wounds, disease, and hardship in wretched prisons, the loss of men—many of them the very flower of the nation's young manhood—was equal to seven hundred a day during the four years of the war. This wholesale destruction of the moral wealth of the country can not be estimated. Emphasis upon such facts by the teacher of American history will make them eloquent arguments in favor of peace.

When we learn to keep in mind the right perspective in teaching the national biography of such a peace-loving people as we have been from the beginning of our history, we shall devote to the arts of peace and to the social and industrial conditions of life that large measure of attention which is their due. In so doing, we shall also bring out the fact that our history is a part of world history and that we have a racial inheritance to which people of various lands and ages have made invaluable contributions. We shall make it clear that for much that we hold dear in our civilization today, we are indebted to the Hebrews, the Greeks, the Romans, and to various countries of Medieval and Modern Europe. We have not lived in isolation; no country ever can. In all phases of our history, our national life has been closely related with the life of European countries and with the rest of the world. And this is as it should be, for no nation can render its appropriate service to humanity except by harmoniously coöperating with other nations,—a fact which

was never so self-evident as in this age of steam and electricity.

One reason, doubtless, why so much stress has been laid upon wars is that the heroic element is called into action on the battlefield. There is often a picturesque and colorful quality in the subject-matter that strongly appeals to boys and girls. This heroic quality as exhibited in campaigns and battles is worthy of emphasis. But heroism is quite as vividly illustrated by men of peace in the performance of social duties. Even if we devote less of the time and strength of the school to the destructive forces of war, and more to the constructive arts of peace, we shall find that there is no history more fascinating or more dramatic for the American boy and girl than our own. To illustrate my meaning, let me mention only a few facts which suggest the character of the peaceful evolution of American institutions. In the settlement of America, European life entered the new world, received large modifications from physical influences, and then reacted upon the social and political life of the old world. When the settler reached America he was European in dress, tools, habits of thought, and ways of doing things. But these he rapidly changed in adapting himself to the trying conditions of pioneer life. In the beginning, therefore, the wilderness mastered the man; but in the end the man mastered the wilderness and brought under his control a continent. The result was a new type, the American. This process of Americanization evolved many dramatic incidents and many heroic deeds.

Now it so happened that the early colonists were largely Anglo-Saxons, having the Anglo-Saxon spirit or impulse with its love of fair play and its keen sense of individual freedom. The political ideas and ideals which these colonists planted here were rapidly modified under the democratizing influence of frontier surroundings; yet the Anglo-Saxon spirit, represented by the early New England settlers, has largely dominated American thought and purpose from 1620 down to the present time. In other words, the Anglo-Saxon spirit on the one hand, and the movement westward with its constant

touch with pioneer conditions on the other, largely explain the American type in its social development.

In the great movement from the Atlantic to the Pacific, there has been a continual advance of the frontier, and in every area of this advance a return to primitive conditions, and also a new social development. In this development—which has been much accelerated because it has taken place for the most part in times of peace—the five phases of institutional life as represented by the family, the church, the school, the state, and industry, are well illustrated. Each of these should receive its due share of attention. Hitherto we have over-emphasized political history, altho the state is the most complex of all the great institutions. In this over-emphasis upon the political side of life. we have tried to teach what the pupil is not ready to understand and failed to give a proper consideration of things which he can underderstand and which are more important for him to know.

These things, it should be emphatically noted, have to do with the constructive arts of peace. In a very elementary way, for example, it can be shown how the simple old-time school in the rude log hut has become the complex educational system of today, and how the hand industry of the early colonial times has grown into the factory system of our modern city.

In dealing with the industries, the inter-dependence of men and of communities should be demonstrated, and the need of coöperation between various countries in the interests of the well-being of all should be strongly set forth. In primitive industry the individual works alone; in modern industry he works in combination with others. In a very emphatic way the modern factory system illustrates the spirit of coöperation. Coöperation and not competition has been the law of material growth and prosperity.

The westward movement has been closely identified with the great tide of European immigration into this country. In sending their thousands and hundred thousands many countries have contributed their thought and their ideals, and all have been helpful. We are a cosmopolitan people, and we

owe much of what we are to what the immigrants, first and last, have brought from their various European homes.

In connecting our national life with the life and work of the world, we shall fail of our duty to the young if we do not show clearly the frank and straightforward character of American diplomacy. We have been honest in our diplomatic methods; we have been sincere in our diplomatic relations. Moreover, in impressing the great ideal of peace and goodwill, we need to inspire our pupils with the thought that nations can not truly and nobly live without a due consideration for all classes and countries. It has been well said that our supreme business as a people is not the frightening of rivals but the making of friends. To put this ideal into practise, we must live up to the motto that justice and righteousness are the keystone of national greatness. Thus shall we meet the moral responsibility that is ours, and in a very real sense occupy as a people a position of leadership among the nations of the earth.

WILBUR F. GORDY

SPRINGFIELD, MASS.

TENDENCIES IN COLLEGE DEPARTMENTS OF EDUCATION

The data from which the following conclusions are deduced have been gathered from reading carefully the announcements of courses in education. Eighty catalogs have been systematically gone thru for this purpose. The institutions whose work in education is here reported include six sectionally representative state universities and two endowed universities. The ten catalogs of each, for 1897 to 1907, furnish statements of policy and plans in operation which in all likelihood are most influential in standardizing this developing feature of combined academic and professional study.

In 1897 these eight institutions offered in all 85 courses, in 1907 182 courses; in 1897 there were 14 instructors, in 1907 47; in 1897 work of graduate grade was offered in 27 courses, 1907, in 64 (approximately); in 1897 the instructor staff included 4 Ph.D. men, in 1907 28; in 1897 one-half of

these departments were subordinate to or minor divisions of the department of philosophy; in 1907 all were independent of the departments of philosophy, and of at least coördinate rank with any other department in the Arts Faculty. In 1897 there was no single course common to all the eight departments, not even the so-called *methodology* course, altho the history and the principles of education, administration, and methods prevail in most of them, and some kind of psychology is offered. In this year there is little sign of agreement upon the fundamentals which shall constitute an introduction to the scientific and professional study of education. In 1907 there are approximately ten courses, embracing topics which in some way are dealt with in each of the institutions named. In 1897 progressively planned courses in single distinctive phases of education are not in evidence, in 1907 these abound. In 1907 all have chosen "Education" rather than Pedagogy, or Science and Art of Teaching, etc., as a catalog name to embrace the range of their activities.

As there are now 269 educational departments in colleges and universities, and 264 in fairly reputable normal schools, as scarcely 15 per cent. of the 500,000 teachers in the field have enjoyed even the advantage of this available scant resource for professional outlook, as this total of 533 departments of education will likely be doubled in another decade, or at least will double their equipment and efficiency, as influential leaders in the field of secondary education will be, in increasing proportion, recruited from the younger men who will have had some professional training, and as the above 15 per cent. of teachers in the schools will probably then include as many more, the question of wise coöperation in directing these pervasive movements and tendencies assumes large proportions.

The following is a dogmatic summary of the above survey. Each item in the count requires elaboration and most of them call for provisos. The whole is, however, I believe, impressionalistically true.

(1) These departments are gradually becoming independent of any set philosophical system, and (partly, at least, due

to the importunity of the large demand and the inadequate preparation of their students) stressing training in pure philosophy less.

(2) In these ten years of progressive development no line of work undertaken has been precipitously dropt, indicating the genuineness of the work and the social demand which called it into existence. Exception should here be made of some departments which have laid less specific stress upon elementary education as such.

(3) In emancipation from the dictation of other departments it is rapidly organizing its own body of newly collected and pertinent facts, following the history of all newly born departments of knowledge. Educational history, educational law, educational administration, educational psychology, sociology, and philosophy, are coming to stand upon a growing vigorous fresh literature and science of their own.

(4) Some of these departments seem to show, not abortive but over-balanced tendencies in some of these lines; for example, in the under or over-emphasis on psychological aspects.

(5) All show the research spirit, various scattered explorations being in evidence in the fairly numerous seminary courses offered.

(6) They are perhaps unique in their efforts to adapt themselves to present social conditions. Contemporary literature, problems, and movements furnish material for a popular course.

(7) The professional ranks are gradually being filled with Ph.D. men who welcome research. As yet, however, the Ph.D. material seems to be drawn chiefly from other graduate departments.

(8) The disposition exists to utilize specialists from given fields in the special methods, thus bringing over into their faculties leading men in other lines.

(9) There is some general evidence that the elective system is not at present working so as to serve to furnish for the intending student of education the desirable uniform academic grounding in psychological, biological, historical, sociological, philosophical, and literary work. Students are far

from being uniformly equipped with simple fundamental concepts which would facilitate and expedite their work in educational theory. For the above reason theoretical work in education is unbalanced, unsatisfactory, and needlessly difficult.

(10) It is, hence, desirable that there should be more official study and more specific recommendation of the *usual special combinations* justified by the actual demand in the high school field. This would enable embryo teachers to so plan their undergraduate work as to provide systematically for more than their specific preparation in a chosen subject.

(11) There are relatively a good number of one hour courses, indicating various profitable but scantily worked fields.

(12) Again there is too much overlapping everywhere. showing certainly lack of a working organization of instruction.

(13) The useless confusion of nomenclature indicates how difficult and how unsatisfactory it is to arrange for credits from sister institutions.

(14) The great increase in the teaching staff and in degree men makes its future status and progressive evolution secure.

(15) The discarding of the name pedagogy, and the general adoption of the term education, it is to be hoped, indicates that healthy condition where, in scientific and scholarly directions, its reach exceeds not too far its grasp.

(16) There are numerous evidences observable also that Herbartianism in educational psychology, the chemistry (or alchemy?) of ideas, is being discarded in favor of a more functional or genetic view of mind.

(17) There is little sign of appreciation of the productiveness of psycho-physics and psychometry. (No suggestion of relief or lament is here implied.)

(18) Most courses are fortunately still in the stage of transition. There is a great need of coöperation in standardizing terminology, and of consensus as to what shall be strictly academic and introductory courses, on a par with history or

Latin, etc., open and useful for any academic student, whatever his future profession shall be.

(19) If the professional study of education is to affect teaching and broaden the professional horizon in all ranks from elementary school to college, in the minds of some the opportunity has come and the time is ripe to begin to work up a suitable course such that in time it would be recognized as genuinely useful for all candidates for the master's or doctor's degree who may look forward to teaching as a life work. This is a logical issue and a legitimate aspiration, however remote may be its eventuation.

(20) Finally, with considerably more assurance, we may affirm that, in this formative stage of development, educational departments may well attempt, from their peculiarly intimate relation to the arts faculty, to the graduate schools, and to the profession of teaching, to formulate a policy and keep rigorously to it, which may look toward a better, higher, broader, and more humane standard for candidates who aspire to the Ph.D. degree in their own line of work at least.

The whole problem of observation and practise teaching seems to be a sort of swamping side issue about which much must be learned from the practical experiences of Germany and France, and even from the universities of Glasgow, Manchester, Toronto, and others. Even if the body of school children of the different states can be protected from that at present necessary year of being experimented upon by absolutely raw beginning teachers, the considerable outlay necessary to provide state universities with facilities for practise teaching under expert guidance and sympathetic advice, would seem easily to justify the public investment. This *face value* estimate is entirely aside from the deeper conception of the practise school as the professional teacher's laboratory for the exemplification, verification, and discovery of sound educational principles.

CHARLES HUGHES JOHNSTON

UNIVERSITY OF MICHIGAN

THE RACE FACTOR IN EDUCATION

A pertinent query that arises in the mind of one observing educational work in a cosmopolitan school-population is—What are the reactions of these children, of such diverse nationalities, to the school curriculum? Is the same curriculum equally good for all of them? Do the children of one race progress as rapidly thru this fixt curriculum as do those of another? In brief—of what importance, in education, is this race factor?

Before this question can be even partially answered several important qualifications must be understood. In the first place, our school curriculum is essentially and predominatingly Anglo-Saxon. Its ideas and ideals, its subject-matter and expression-forms, are those of the English people. So, at the very outset, we find this great difference between the child whose home is English, and the child whose home is, for example, Chinese. The school work of the English child continues and supplements the home life of that child. The home and the school unite in giving a comparatively unbroken training; the language, the general atmosphere, the ideals, of the one are also those of the other. The child is "at home" in school. With the Chinese child, however, a very different condition exists. The language of the home is not the language of the school; the habits and customs, the general atmosphere, the ideals, of the school are not those of the home. The school is a strange place and the statements that "teacher" makes are not necessarily the same as those that the father and mother make. The child has two schools, which are unconsciously more or less antagonistic. Even under the best of educational policies, the school tends to somewhat alienate the child from the home, and this is greatest when the home is of a race-character entirely different from that of the school.

Secondly, the language of the school is English. Not only must the Chinese child comprehend and master the ideas and ideals of a foreign people, but he must do so in a foreign language. The handicap is double. Not only the spirit of the institution, but the form of the schooling, is foreign. The

Chinese boy, who speaks his own language at all times outside of school hours, must keep pace with the American lad, who speaks only the language of the school.

These conditions existing, one might easily conclude that white children progress much more rapidly in their studies than those of other nationalities. Familiar with the vernacular, accustomed to the general ideas of the school, for they coincide with those of his home, the white child should uniformly surpass his schoolmates of other nations, who labor under this double drawback.

To our surprize, we find that such is by no means the case. Investigation reveals that the white boy does not mentally outstrip, in his school work, the boys of other races. Indeed, the converse is very frequent, and we find that the best scholars in any grade are frequently of other races.

Our analysis of this unexpected condition shows us that there is combined with the "superior mental powers" of the white school child, a very frequent lack of persistent effort; and that the white child is self-handicapped. Faithful diligence and sincere effort give to the other race that training and comprehension that the American child frequently fails to secure.

So the children—American, Hawaiian, Chinese, Japanese, Portuguese, Korean, etc.—in any given grade, progress generally together, and the race factor, so far as mental aptitude is concerned, is negligible.

It is claimed by some, who support their statements with much proof, that this popular belief in the scholastic handicap of non-white races is untrue. It is claimed by such that the differences between the home and the school, just enumerated, have no appreciable effect upon school work. The child is not handicapped in the mode, or in the number of modes of expression. The conclusion from these statements is, however, the same as that previously given, namely,—that the children of all nationalities progress with general uniformity of promotion, thru the grades.

If we deny this statement—if we claim that the children of different races have markedly different mental ability—then

we must confess that the school system which forces these children to do the same amount of work in the same length of time is radically wrong.

If the Chinese and the Japanese can progress at a markedly faster rate than the white, or the Hawaiian, then it is not fair to put them all in the same room and grade, some restrained, some lagging.

Pushing the assertion of racial mental difference to its logical conclusion we arrive at the segregation of each race in its own school, moving at its own racial rate of progress. The conditions become those now actually in practise in certain portions of the South, where the negro goes to one school, and the white to another.

An interesting problem, suggested by the above considerations, is this—At what age, in an individual, do the characteristic mental traits of that individual's race first appear? The answer becomes a determinant of considerable importance in education.

The general super-education of children is notorious—we have been training juvenile minds in adult terms—an unwise hothouse system that is slowly being replaced by the motor-activity education. The boy of twelve represents the man of a thousand years ago, and his training should be correspondingly primitive and physical. Too commonly he is trained as if he were in full possession of the contemporaneous race-mind, into which heritage he does not really come until the middle period of his adolescence.

The consensus of opinion is that racial mental differences do not appear as distinctive until adolescence, and are thus, from the viewpoint of the elementary school, negligible.

The race factor in elementary education, therefore, becomes a matter of minor importance, and the school in which varied races progress with general uniformity thru the grades —variations being individual and not racial—amply justifies itself. Indeed, its pupils, from their very diversity, learn unconsciously a broad humanitarianism, surmounting race prejudice, and making for ideal citizenship.

VAUGHAN MCCAUGHEY

HONOLULU, T. H.

IX

REVIEWS

Arithmetical abilities and some factors determining them—CLIFF WINFIELD STONE, Ph.D., Columbia University Contributions to Education: Teachers College Series, No. 19, 1908, 101 p. $1.00.

It seems to the writer that this is a study of the type that is so much needed in the field of education at the present time. A current writer has very forcefully put it in this way,—"It is quite significant that those who are engaged in training the young, whether they be teachers or parents, seem to be much more interested in concrete data pertaining to child life than in logical analysis of ends, values, and processes in education." One does not care to listen to a theoretical point of view as such; but when an investigator states that he has actually tested under standard conditions many hundreds of children with reference to a certain trait or ability, and that he has reached certain definite conclusions, we are all ready to listen to him. Professor Stone's contribution is such a piece of work, and as such it commends itself to city superintendents and arithmetic teachers especially, but is also suggestive to all investigators in other fields, who are desirous of gaining statistical information of value.

He states in the beginning that "the central purpose of this study is to make one more contribution to exact knowledge of the relation between distinctive educational procedures and the resulting products." His problem is to discover arithmetical abilities of 6A pupils, and to see what relation this ability has to the educational procedure and method in the particular school tested. For his data he investigated 26 school systems, and not less than 100 children in each system. The number of cases is thus large enough, and they are sufficiently well distributed over the country in different systems, to insure validity as to conclusions. The tests were

all personally conducted by the author, and great care was used to have conditions uniform.

Two types of tests were made, one upon the fundamental rules, and another upon reasoning ability. The tests seem to be perfectly fair, and were arranged to suit the average ability of students in the 6A grade of the systems tested.

Professor Stone finds that in the 26 systems there is a great variability among the systems themselves as to requirements, methods, point of view in training, etc., and likewise that there is great variability among the pupils, both as to the amount accomplished, and the accuracy of their work. He finds that in different systems there are different requirements as to time spent in the study of arithmetic, and at present there seems to be no standard upon which different systems are working. He also finds that there appears to be no correlation between the amount of time spent upon the subject and the efficiency of the pupils to perform the tests herein stated. Length of time devoted to the study does not appear to be a guarantee of ability. In this connection he offers some very practical suggestions to superintendents (see p. 69) for deciding how much time should be devoted to the subject of arithmetic.

The author reaches the conclusion that some of the courses of study are functioning in an excellent manner in producing students who are efficient in the fundamentals, and who have also developed reasoning ability. He gives brief extracts from the courses of extreme degree of excellence, and suggests that a study should be made reproducing large numbers of courses of study in American schools, having their relative excellences indicated. Such means of standardizing courses of study and systems of education are much needed at the present time.

This excellent study of Professor Stone provides the educational world with the means of beginning to standardize its products, and to see the relation of the products to the course of study and the method of instruction. The foundations of arithmetic should be made the common possession of all children before they reach the compulsory education

limit. Any one can learn how far his pupils have progressed in this respect by measuring their abilities according to Professor Stone's tests. These tests are given in the book and can be reprinted on individual slips for use, or they may be secured from Professor Stone at a nominal cost. The method of the study is given fully in Part I, with the exception of the scoring of the fundamentals; and Part II gives data by which a city superintendent may compare the abilities of his pupils with those of 26 representative systems.

It seems to the writer that this little work should appeal especially to the superintendent who is wide awake to the standardization of his grade work in any field. The method employed may not be confined to arithmetic in the 6A grade, but to any grade in any subject. If many such studies were prosecuted in American schools, it would not be long till we would reach something definite in the teaching process, and the products of education could be accurately told from the educational procedure and the method employed. It is to be hoped that many such studies may soon appear, bearing the same stamp of scientific treatment for other fields, which Professor Stone has so carefully worked out for arithmetic.

ELMER E. JONES

INDIANA UNIVERSITY

Social education—By COLIN ALEXANDER SCOTT. Boston: Ginn & Company, 1908. xi+300 p. $1.25.

This book is written from the point of view that the schools should train the young for useful living in a social democracy. But according to Dr. Scott they do not. On the contrary, as at present organized, they are weak, he says, "in trying to prepare future members of the social order in the medium in which the conditions of the social spirit are eminently lacking." As a remedy for this weakness, the author proposes to add to the present curriculum subject-matter selected by the pupils and work carried on by them in groups which they themselves organize. To make this plan effective, the teacher must study the social action of class aims and ideals, and also the leadership and organization involved in the

activities of the pupils. Dr. Scott sets forth the following advantages of this self-organized group work: It develops resourcefulness, initiative and true leadership, all of which are social powers of a high order; it stimulates democratic responsibility to one's own ideals and to those of others on the same social level; it makes an organic connection with the life interests and activities of the pupils; and it brings about a self-organized contact between the individual member of the class and his fellows. In illustrating his theory of the school as a social organism, the author explains in interesting detail the working of the school at Abbotsholm, England, the George Junior Republic, and the Dewey School.

In all this discussion of the school as a social institution, Dr. Scott shows himself to be a master of his subject. His account of the school as a place where social forces are ever active is based on wide observation of various kinds of schools from the kindergarten to the college. As a result of such observation, Dr. Scott attempts to show how his theory may be applied to such culture themes as arithmetic, science, reading, language, literature, fine art, manual training, and industrial education. In so doing, he offers invaluable suggestions as to ways and means of socializing the pupils and of preparing them for intelligent and useful coöperation with their fellows in adult community life.

The experiences which he recounts will to many seem fragmentary and insufficient; but they can not fail to prove stimulating and helpful to all thoughtful teachers. As Dr. Scott wisely remarks, "It is a point of view or method of thinking rather than a completed system of thought" which he presents. The school is not an aggregation of individual units where every pupil lives in isolation from his fellows; but it is, or should be made, a coherent social body, representing definite social forces and working under fixt social laws.

Altho the plan which the author proposes may seem to many impractical, yet it can not fail to help the teacher to work out the educational problem with reference to the pupil's point of view rather than to the subject-matter organized for

him by adult scholarship. The school should not require the pupil to devote his energy wholly to memorizing ready-made facts and to acquiring habits of industry and obedience. For quite as valuable as any of these is the development of a truly social spirit which is just as ready to follow as to lead, and which is fundamental to the successful working of democratic institutions. I believe Dr. Scott is right when he suggests that the only hope for a democracy like ours is the extension of social education.

There can be no question, then, that the movement which he discusses with so much ability and eloquence is of the first importance. The school should be so organized as to produce that rational coöperative spirit which is necessary for the safe-guarding of justice, liberty, and equality of opportunity for all. Of course it is difficult to apply in practise the author's lofty ideals, but in emphasizing the need of social education and in helping teachers to look at the school from a social point of view, Dr. Scott has performed a patriotic service. Illuminating as it does the problem of socializing pupil activities in school life, *Social education* deserves a wide reading by superintendents, principals, and teachers.

WILBUR F. GORDY

SPRINGFIELD, MASS.

A textbook of experimental psychology—By CHARLES S. MYERS, Lecturer in Experimental Psychology in the University of Cambridge and Professor of Psychology in King's College, University of London. New York: Longmans, Green & Co., 1909. xvi+432 p. $2.40 net.

Here we have a textbook of a sort that has long been needed. We have had a wide choice of introductions to general psychology, and a considerable variety of laboratory manuals, but no book, of an elementary character, which set out to tell the results as well as the methods of experimental psychology. The introductory textbooks have taken scant notice of experimental work, and the laboratory manuals have treated of methods rather than of results. We have needed a work which should show something of what experiment has accomplished—a book on the lines of the usual

text in other sciences—and now, thanks to Dr. Myers, we have one. Still more, we have a good one, written by a psychologist who knows the subject at first hand, who is judicious in his choice of material, and duly critical in his use of it.

The book is not free from faults, in either matter or presentation. The author expresses regret that exigencies of space have compelled the omission of many topics, such as animal and child psychology. Other topics of interest which might well have received fuller recognition are reading, eye movements, and the effects of practise. The treatment is fuller on the side of sensation and perception than on the side of the higher intellectual processes. Yet the disproportion between the two sides is not nearly so great here as in many treatments of psychology, and, on the whole, the ground has been covered as well as could be expected. As to the manner of presentation, the main criticism is that the book makes rather stiff reading. The reviewer has tried it on college students of experimental psychology, and found it rather severe for them. Its difficulty arises mainly from condensation. The results of quite an extraordinary number of researches are reported in this relatively small volume, and the author's skill in succinct and accurate presentation of the main facts is by no means slight; but a little more elaboration of the meaning, here and there, would certainly have aided the reader's progress. In addition to this matter of condensation, there are a number of passages which are carelessly and obscurely exprest. These difficulties are however by no means sufficient to unfit the book for use by classes beginning experimental work, or by the educated reader who is desirous of gaining a knowledge of the aims and accomplishment of experimental psychology.

It would be impossible to give, in the brief compass of a review, any adequate account of the contents of the book. It is distinctly not a treatment of systematic psychology, some knowledge of which is, indeed, presupposed in the reader. The author does not lose himself in the discussion of general problems, nor has he pet theories to exploit. His treatment

is admirably objective. His method can be judged, perhaps, from an outline of the two chapters which he devotes to memory. He brings together under this head the work which generally passes under the names of "imagery" and "association," as well as what are usually classed as experiments in memory. His treatment of imagery and association is decidedly brief. He then proceeds to an analysis of the different methods which are employed in experiments on memorizing and on retention, and follows this up with a statement of about twenty-five different matters in memory that have been investigated. In about ten of these twenty-five instances, he describes the original experiment, tho not in much detail, and sometimes gives a sample of the numerical results. One is surprized—if one has not followed the recent progress of work on memory—to see how much has really been discovered regarding this function.

The book may be said to consist of three parts. The main text consists of about 275 pages. In addition, the text contains, in many chapters, bracketed paragraphs, which are to be omitted on first reading, and which add up to about sixty pages. An appendix of eighty pages is devoted to laboratory directions for 155 experiments. These are not described in great detail, for the author recognizes that each teacher is likely to have his own preferences as to the special methods to be used in a given line of experiment.

The work is especially welcome as an index of the good start which experimental psychology has at last made in England. It may confidently be predicted that it will be found extremely serviceable in America as well.

R. S. Woodworth

Columbia University

Autobiography—By John Stuart Mill. New York: Longmans, Green & Co., 1908. 191 p. 50 cents.

It is a distinct satisfaction to see a well-printed and cheap edition of this genuine English classic. It has been customary to poke fun at John Stuart Mill and his father because of the amazing precocity of the child, and what appears as the extraordinary pedantry of the parent; but nevertheless few mod-

ern lives are better worth reading about than that of Mr. Mill. He tells his own story of his mental development with singular clearness, frankness, and charm. In these pages one reads the story of nineteenth-century English radicalism, growing swiftly in the friendly soil of philosophic and economic literature, and in the presence of stirring social and political problems. No well-read man or woman in the English-speaking world is unfamiliar—or at least ought to be unfamiliar—with Mill's *Autobiography*. We gladly call attention to this new and attractive edition.

The land of promise: an account of the material and spiritual unity of America.—By RICHARD DEBARRY. New York: Longmans, Green & Co., 1908. 311 p. $1.50.

Of making books upon America, there is literally no end. The writer of this book is apparently an English clergyman who first visited America in search of a climate favorable to his health. Whatever his purpose, he used his opportunities to good advantage. His generalizations are much sounder than those usually found in books of this type, and altho the writer was over-imprest by certain emphatic, but not very profound or representative, personalities, yet on the whole he saw straight and well. It is particularly to be noted that he did not get his view of American life and society in the usual formal ways. He lookt wisely and well in many directions and he shrewdly divined the true meaning of not a few movements and personalities. The book is agreeably written, and well worth while.

The first two numbers in the series entitled Riverside Educational Monographs are exceedingly attractive. The series is edited by Professor Suzzallo of Columbia University. The first issue is *Emerson on education*, and the second is Fiske's *Meaning of infancy*. The selection of these two distinctively leading contributions to the American literature of education gives the series a noteworthy distinction at the outset. Professor Suzzallo's introductions are helpful and dignified.

(Boston: Houghton Mifflin Co., 1909. 76 p.; 45 p. 35c. each.)

The warm reception that has been given to the textbook on economics by Professor Seager of Columbia University, makes almost certain that his new *Briefer course in economics* will be found acceptable by high school and college teachers. The *Briefer course* contains some material not found in the larger work, and the bibliographical material is full and useful. (New York: Henry Holt & Co., 1909. 476 p. $1.75.)

We are not particularly imprest with the value of *History of common school education* by Lewis F. Anderson of the State Normal School at Marquette, Mich. The study of the history of education is of extraordinary valuelessness unless it is treated from the standpoint of *Culturgeschichte.* There is nothing of this in Mr. Anderson's book, and the literary form, or rather the lack of it, is not agreeable. (New York: Henry Holt & Co., 1909. 308 p. $1.25.)

After a few years it is not likely that pragmatism will have any other than a purely historical interest, but just now while its advocates are active and insistent, there ought to be a large body of readers to profit by Professor Pratt's interesting book entitled *What is pragmatism?* The book contains a number of shrewd critical observations and its style is enjoyable. (New York: The Macmillan Co., 1909. 256 p. $1.25.)

The latest addition to the Macmillan Pocket Classics is a well printed edition of four books of *Knickerbocker's History of New York.* The editor is Professor Greenlaw of Adelphi College. (New York: The Macmillan Co., 1909. 288 p. 25c.)

A delightfully printed edition of Marlowe's *Dr. Faustus* comes from the Sturgis & Walton Company of New York. (78 p. 45c.)

Famous poems explained is the title of a book, the very type and conception of which are deterrent. Famous poems ought not to be "explained." (New York: Hinds, Noble & Eldridge, 1909. 236 p. $1.)

Mr. W. L. Courtney, well known as philosophical writer and editor, has made an undoubted success of his *Literary*

Man's Bible. The present edition is the fourth to appear in a little more than a year. This fact bears testimony to the appreciation with which the book has been received. Mr. Courtney's work is scholarly and judicious in the extreme, and his selections from the Bible, as well as his classification of them and his form of printing, are admirable and most helpful. This is the sort of book that ought to be read in the American secondary schools under the terms of the new uniform college entrance requirements in English. (New York: Thomas Y. Crowell & Co., 1909. 414 p. $1.25.)

L'Istruzione popolare nelli Stati Pontifici (1824-1870) is a careful and thoro-going piece of historical work which deals with a subject-matter almost unknown in the United States. The author is E. Formiggini-Santamaria. He has traced with care the conditions of the Italian schools in the Papal states during the period immediately preceding the political unification of Italy. His book is indispensable to a full understanding of this period. (Bologna-Modena: A. F. Formiggini, 1909. 290 p. 6L.)

A useful but rather elementary book, entitled *The elements of hygiene for schools,* has been compiled by Miss Isabel McIsaac, formerly Superintendent of the Illinois Training School for Nurses. Teachers will be more likely to find this book useful than students. (New York: The Macmillan Co., 1909. 172 p. 60c.)

Book IV of the Gulick Hygiene Series is entitled *The body at work,* by Frances G. Jewett. It, too, is very elementary, and is apparently intended for students in the upper grades of elementary schools and in high schools. Boston: Ginn & Company, 1909. 246 p. 50c.)

R. H. Bell, in a volume entitled *Changing values of English speech,* has brought together a number of more or less connected essays on words and their uses. His material is familiar enough to scholars, and is attractively presented. (New York: Hinds, Noble & Eldredge, 1909. 302 p. $1.25.)

In *Misery and its causes,* Professor Edward T. Devine of Columbia University, brings together in impressive fashion

a statement of the grounds on which the philanthropic work of today really rests. Dr. Devine is the first American authority on this subject, and we confidently commend his admirable book to those who wish to be good intelligent citizens. (New York: The Macmillan Co., 1909. 274 p. $1.00.)

Mr. Arthur O. Norton of Harvard University has done a helpful and useful work in his *Readings in the history of education: mediæval universities.* Mr. Norton has applied to this field of study the method which has become familiar in every department of historical teaching. Students of the history of education will find here first-hand material from which to gain a knowledge of mediæval university conditions. The book is not only good in itself, but is a good example of a good type. (Cambridge, Mass.: Published by Harvard University, 1909. 152 p. $1.)

Dr. Kuehnemann of the University of Breslau, who has been for two years at Harvard University as German exchange professor, has written for the *Deutsche Rundschau* a glowing panegyric on President Eliot and his work, which has been translated into English and published in an attractive volume. (Boston: Houghton Mifflin Co., 1909. 85 p. $1.00.)

It takes some courage in these days to publish a volume of verse, and we are glad to find in *Galenstock,* by William Moore, not a few lines of more than ordinary sweetness and light. (London: Kegan Paul, Trench, Trübner & Co., 1909. 115 p. 3s. 6d.)

A school algebra, by W. E. Paterson, indicates very well the difference between the English and American methods of teaching this subject. We should think it would be useful to bring such a book to the attention of American students at least as an alternative to their usual tests. (Oxford: Clarendon Press, 1909. 604+lxvii p. 4s.)

The very necessary and always very difficult subject of *The syntax of the French verb* is treated clearly in a little book by Edward C. Armstrong. The attentive teacher will welcome the helpful typography of this attractive book. (New York: Henry Holt & Co., 1909. 192 p. 90c.)

Under the title *Progress of education in India, 1902-1907,* H. W. Orange, Director General of Education in India, sets out in two handsome volumes all facts, both general and statistical, that are connected with this great movement. Nowhere are the English administrative system and skill better exemplified than in the government of India. The stupendous task there undertaken may be, in some slight degree, understood by a careful reader of this invaluable report. (Calcutta: Government Printing Office, 1909. 342, 168 p. and maps. 8s. 3d.)

A second volume of *Readings in modern European history,* by Professors Robinson and Beard of Columbia University, deals with the period following the Congress of Vienna. Contemporary forms of government in France, Italy and Germany, are traced with especial care as are some of the main steps in the development of the modern industrial system. An interesting chapter is devoted to the Turkish Empire, and another to the expansion of Europe and its relations with other parts of the world. The book is the best of its type that has as yet come to our notice. (Boston: Ginn & Co., 1909. 541 p. $1.75.)

We welcome various editions for school use of literary selections from the Bible, and we hope now that the Bible has been definitely recognized as a book which may be read by secondary school students preparing for college that textbooks of this type will increase in number and value. *Old Testament narratives,* by Professor Nettleton of Yale, is very well done. (New York: Henry Holt & Co., 1909. 294 p. 60c.)

Professor Witkowski of the University of Leipsic is the author of an admirable little book entitled *German drama of the nineteenth century,* of which Professor Horning of the University of Toronto has made an authorized English translation. Students of modern literature, who wish in small compass a critical survey of the German drama of the last hundred years, will find it here. (New York: Henry Holt & Co., 1909. 230 p. $1.00.)

Recitations for assembly and classroom, by Miss Anna T. O'Neill, is a book of familiar type that has a very considerable usefulness. The author has brought together a large number of familiar selections from English poetry and some capital prose. (New York: The Macmillan Co., 1909. 454 p. $1.10.)

It is not quite clear what possible purpose can be served by *ABC of philosophy,* of which Grace F. Landsberg is the author. It is more or less of a catalog *raisonnée,* and nothing more. (New York: R. F. Fenno & Co., 1909. 147 p. $1.00.)

An attractive title is *Teaching children to study,* by three New York public school teachers. Nothing is more generally neglected in education than this. Most teachers confine themselves to setting tasks and then awaiting the results of the pupils' activity, or the contrary. This book will be found very useful by thoughtful teachers in elementary schools. (New York: The Macmillan Co., 1909. 193 p. 80c.)

Principal Sir Oliver Lodge of the University of Birmingham is an indefatigable writer. On *The ether of space* he has done the sort of service that Huxley and Tyndall used to do a generation ago. Here in a few concise and well-ordered pages, he sets forth in understandable language all that is now known and believed regarding the ether. The book contains necessarily some mathematics, but not too much. It may be unreservedly commended. (New York: Harper & Brothers, 1909. 170 p. $1.00.)

X

NOTES AND NEWS

The Denver Meeting of the National Education Association

The second Denver meeting of the National Education Association has come and gone. Many trusted and valued leaders who were at Denver in 1895 were missing in 1909. Most of them had past over in the interval to the great majority; a few, like Dr. Harris, were prevented by ill health from making the long journey to the foot of the Rocky Mountains. The attendance was fairly satisfactory, judging by the standard set during the past few years, but the registered enrollment was most disappointing. From such reports as have been published, it appears that only about 3,000 of all those who attended the Denver meeting from points outside of Colorado took occasion to register and to pay their membership fee in the Association. This is an ominous and disappointing fact. Now that it is no longer possible to collect the membership fee as part of the price of the railroad ticket to the place of meeting, the Association must depend upon the loyalty and good-will of its members for its financial support. At Denver it was a matter of surprized comment that in so many cases this loyalty and good-will did not seem to be worth two dollars.

President Harvey had prepared an attractive program, and it was well carried out. His own dominant educational interest naturally gave the meeting its key-note. Two of the very best papers read at Denver were those of President Harvey himself, at the opening session, on industrial education in general, and a shorter paper dealing with industrial education as related to the elementary school, read to the Council by Assistant Commissioner Downing of New York.

Judging by the local newspapers, a somewhat larger number of foolish things than usual was said by speakers in several of the department meetings. At all events, the newspapers suc-

ceeded in extracting from more than a few papers material for some startling and repellent headlines, which straightway, *more Americano,* were started rolling around the country as profound truths and the mature outgivings of the Nation's most experienced educators!

It is an interesting coincidence that as at the Denver meeting of 1895 the Directors adopted the report of a committee which classified the membership of the body and brought it to its present status of a professional association instead of a crowd of excursionists, so at the Denver meeting of 1909, the Directors adopted the report of a committee which made sweeping changes in the number and grouping of the several departments. As long ago as 1901 at Detroit, Principal James M. Green of New Jersey, in his presidential address, pointed out the inadequacy as well as the illogical character of the existing division into departments. At that time a committee was appointed, headed by Mr. Alfred Bayliss of Illinois, to study the whole question of departmental organization within the Association and to make its report at an early meeting. Meanwhile the situation as to the departments has grown steadily worse with each new addition, and no report from the committee has been forthcoming. During the past year, however, thru the influence of President Harvey, the committee actively took up anew the study of the matters committed to it eight years ago, and after long and patient consideration in meetings held at Chicago and at Denver, submitted an important report which was, after discussion and with some difference of view, adopted by the Directors at Denver. The effect of this report is to reduce the departments from their present number to nine, and this reduction was effected chiefly by consolidation. Hereafter and until further action by the Board of Directors, the departments will be the following:

National council of education; superintendence; professional preparation of teachers; elementary education; secondary education; higher education; industrial education; music; school patrons.

The departments which disappear are school administration

by consolidation with the department of superintendence; child study by consolidation with the department of normal schools in the new department of professional preparation for teachers; business education and science instruction by consolidation with the department of secondary education; manual training and rural and agricultural education by consolidation with the department of technical education under the new name of the department of industrial education; and kindergarten by consolidation with the department of elementary education.

The department of Indian education is abolished, and the teachers of Indian schools are invited to continue their meetings with the National Education Association as an affiliated body instead of as a department.

The arguments in favor of the adoption of the committee's report were that it would materially reduce the cost of publication and the cost of distribution of the volume of proceedings; that it would lessen the dissipation of energy and interest, consequent on the multiplicity of departments; and that it would clear the ground for a more logical and effective development of the departments in the future. With this latter point in mind, the committee was continued and enlarged by the addition of President-elect Joyner, President Harvey, and former President Green, who first brought the matter of department organization forward for discussion in 1901.

The directors elected the following list of distinguished foreigners to be corresponding members of the Association:

England—Alfred Mosely, C. M. G., Union Bank Buildings, Ely Place, London, E. C.; Professor Henry E. Armstrong, 55 Granville Park, Lewisham, S. E., London; J. Struthers, secretary to the Committee of Council on Education in Scotland, 55 Whitehall, London; R. Blair, Education Department, Victoria Embankment, London, W. C.; H. T. Gerrans, bursar of Worcester College, Oxford; Sir Edward Henry Busk, vice-chancellor of the University of London; T. Gregory Foster, Ph.D., provost of University College, London; Henry Jones, Ph.D., professor of moral philosophy in the University of Glasgow; J. St. Loe Strachey, M.A., editor of *The Spectator*, London.

Denmark—Otto Jespersen, professor of English philology in the University of Copenhagen; Harold Höffding, professor of philosophy in the University of Copenhagen.

Germany—Professor Dr. Ulrich von Wilamowitz-Möllendorff, professor of classical philology in the University of Berlin; Professor Dr. W. Paszkowski, director of the bureau of information, University of Berlin; Professor Dr. F. Klein, professor of mathematics in the University of Göttingen; Geheimrat Dr. Friedrich Schmidt, Ministerial Director, Cultus Ministerium, Berlin; Geheimrat Dr. Reinhardt, Cultus Ministerium, Berlin; Professor Dr. H. Münch, professor of education in the University of Berlin.

France—M. Louis Liard, vice-rector of the University of Paris; M. Ernest Lavisse, director of the Ecole Normale Supérieur, Paris; Professor Emile Boutroux, director of the Fondation Thiers, Paris.

The self-seeking and wire-pulling element was in evidence in the hotel lobbies very much after the fashion at Asbury Park, Los Angeles, and Cleveland, but this element seemed to be neither so numerous nor so noisy as in previous years. There was a good-natured three-cornered contest for the presidency of the Association between the friends of Superintendent Blewett of St. Louis, Superintendent Phillips of Birmingham, and State Superintendent Joyner of North Carolina. Each had a host of advocates, and each was thoroly qualified for the presidency. When it became apparent that Mr. Joyner had the largest number of votes in the nominating committee, his nomination was immediately made unanimous with great heartiness. Altho Mr. Joyner has not been so closely identified with the Association as either Mr. Blewett or Mr. Phillips, and is not so well known to its members, yet he has performed a stupendous service in the state of North Carolina, and he has every personal and professional qualification to fill admirably the high office to which he has now been chosen. President Joyner will receive, as he should, the cordial and hearty support of the entire membership of the Association. From the expressions of opinion heard on every side, it is safe to say that the friends of Messrs. Blewett and Phillips

need only possess their souls with a little patience in order to see their favorites honored as they would like to have them.

Are the Halcyon Days of the National Education Association over?

The older members of the National Education Association asked each other many times at Denver, "Are the halcyon days of the Association over?" A number of causes suggested the question. Many of the older and more distinguished leaders of education in the United States are rapidly passing away, or are dropping out of the ranks because of age or impaired health. Those who are coming forward to fill their places are not, it must be admitted, very promising material. A number of the most active of them are more interested in promoting their own personal interests thru the medium of activity in the Association, in securing a better paid or more conspicuous post, than in contributing to educational thought or to details of educational policy. Not a few of them are quite incompetent to make any such contributions. Then, too, since the railroad arrangements which formerly existed seem no longer possible, the Association can not command the revenue which it once had and must retire, perhaps for ever, from the stimulating field of investigation which it entered on with so much success at Saratoga in 1892. Nothing has done so much to attract strong men to the Association, and to keep them interested in its work, as this policy of using the Association's funds for study and publication. Now that funds are no longer available for this end, the policy halts or perhaps must be finally discontinued. Again, the rapid growth of the summer schools and the summer sessions of universities has powerfully diminished the attendance at the National Education Association meetings. The best and most studious teachers are going year after year to these schools and universities for study and wider training. The date at which the National Education Association meets, and apparently must meet, makes attendance upon its sessions, in most cases at least, inconsistent with membership in a summer school or with study at a university summer session. It may be that the revenue of the Association within the next year will

fall short of its necessary expenses, even after every possible economy has been practised. Should it do so, a very serious problem will confront the administration.

There is one certain and easy way by which the Association can be lifted above all possible embarrassment, no matter how small may be the registered attendance at any given meeting, and that is to have institutions—universities, colleges, normal schools, secondary schools, elementary schools, and libraries—join the Association as active members, receiving the annual volume of *Proceedings* in return for their membership fee and putting it upon the shelves of the institution's library. This volume is well worth the two dollars that membership costs, and with a membership composed of, say, 5,000 institutions which would not die, or resign, or move away, the future of the National Education Association would be secured. It is understood that in the State of New York, and perhaps elsewhere, an active movement to build up this institutional membership is shortly to be undertaken. We wish it all success, and nothing that could happen would be better for the National Education Association than to have it succeed.

The State Board of Education in Massachusetts

On July 1 the old State Board of Education in the Commonwealth of Massachusetts and the Commission on Industrial Education past out of existence, in accordance with a statute past by the legislature and approved by the governor May 28, 1909. The main provisions of this act are as follows:

"Four of the present members of the board of education and one of the members of the commission on industrial education shall be appointed members of the board . . . provided for by this act."

"The new board of education shall exercise all the powers and be subject to all the duties now conferred or imposed by law upon the present board of education or upon the commission on industrial education . . . except as may otherwise be provided herein."

"The board shall appoint a commissioner of education,

whose term of office shall be five years . . . Said commissioner may at any time be removed from office by a vote of six members of the board. He shall exercise all the powers and be subject to all the duties now conferred or imposed by law on the secretary of the board of education. He shall be the executive officer of the board, shall have supervision of all educational work supported in whole or in part by the Commonwealth . . ."

"The board shall also appoint two deputy commissioners at equal salaries, one of whom shall be especially qualified to deal with industrial education."

Thus passes away the State Board of Education instituted in 1837, continuing in office, therefore, for a period of seventy-two years. Horace Mann was the first executive officer, and Edward Everett the first chairman of the board of education. A long line of illustrious men have served on this board, and its history is the story of the rise of the common schools, the development of the normal schools, and the solution of vexed problems which have for three-quarters of a century made the Commonwealth of Massachusetts by common consent the standard-bearer in the cause of education for the sister states in the Union. Indeed, the acts of this board in the upbuilding of the schools have more than any one cause been instrumental in developing the common schools thruout the United States.

With this glorious record, however, it is undeniable that beginning about twenty years ago, the board of education began to lose the confidence of the schoolmen of the state. This, with the appointment of the industrial commission, and the rising tide in favor of vocational training, created a conviction in the legislature that the traditions of the board of education, its conservatism, and even its triumphs in the past, unfitted that body to handle speedily and efficiently the new problems which the age and the needs of the young people in the state demanded.

The new state board of education, appointed by the governor, consists of nine members, as compared with eight members on the old board. Of these, three hold office until 1911,

three until 1912, and three until 1913. The new board is composed of Frederick P. Fish, T. B. Fitzpatrick, C. Q. Richmond, Mrs. Ella Lyman Cabot of the old board, Professor Paul H. Manus from the industrial commission, Sarah L. Arnold of Simmons College, Professor L. L. Conant of Worcester Polytechnic Institute, President Hamilton of Tufts College, and Simeon F. Chase, a manufacturer of Fall River. The board, with Frederick P. Fish as chairman, is a progressive-conservative body.

Created at this time, an initiative may be expected which would have been difficult to develop in the old board. Great things may be expected from this new organization, but the state need not expect to be startled by any immediate radical change in courses of study and plans for the education of the children of the Commonwealth. The process, if one may judge from the combination of radicalism and conservatism, evinced in the composition of the board, will be more that of grafting than of substitution. Symptoms of a desire to cooperate more closely with the superintendents of schools and principals of high schools over the problems arising for solution in the state are visible. Judging from chance interviews with individual members of the new board, no announcement of a specific, definite policy relative to the schools of the state may be expected. At the present time, its first and greatest problem is that of securing a competent, efficient commissioner of education to serve as its executive officer. It would seem that the opportunities for reputation and prominence held out in this new office should be particularly attractive to men of personality and power, who can adequately rise to the situation. The board of education is broad-gaged, and while recognizing that, all things considered, a Massachusetts man would be in closer touch with the problems of the state, they may find this man in any quarter of the globe.

It is not believed in well-informed circles that the new board of education is to institute any radical recommendations as to the conduct of the schools of the Commonwealth. Yet, this board has been appointed because of a deep-seated dissatisfaction with the trend of the schools. Undoubtedly, their atten-

tion will be directed to the elimination of unnecessary elements in the course of study, involving the shortening of the time spent in the grammar school, and making possible the introduction of certain courses which may be correlated with vocational work to come later. Similar problems, involving duplication of effort in the normal school and high school, must soon demand attention. These problems and their solution will necessitate a rather slow development of vocational schools; because each step must be carefully studied before the Commonwealth can permit the reckless and expensive unauthorized experiments which would follow the leadership of a less able and less intelligent board of education.

Without power to enforce their recommendations upon the schools of the state, except in so far as they can influence public sentiment, individual members of the board, at least, seem to have clear views of the problems involved: with their desire to be an active force they manifest a desire to abandon largely their individual views, if necessary, to follow the leadership of the great commissioner who will be the executive officer of the board.

Reorganization in the Bureau of Education

The United States Bureau of Education at Washington, which has occupied for thirty-seven of the forty-two years of its existence the rented building at the corner of Eighth and G streets, Northwest, was removed in July to the second floor of the old Post-Office Department building between Seventh and Eighth and E and F streets, with storage and mailing rooms in the basement. Its new quarters are more commodious and much more comfortable than the old. This is the first time in the history of the Bureau that it has been quartered in a building belonging to the government.

A measure of reorganization in the staff of the Bureau was made during the month of July. Mr. Lewis A. Kalbach, who has been connected with the Bureau for twenty-two years, and who has served during the past three years as clerk to the Commissioner, in addition to his duties as specialist in land-grant college statistics, has been appointed chief clerk of the

Bureau. He has been succeeded as specialist in land-grant college statistics by Professor James E. McClintock of the University of Maine, whose principal work will have to do with the relations of the Federal Government with the land-grant colleges of agriculture and mechanic arts. The former chief clerk, Mr. Lovick Pierce, continues his connection with the Bureau as chief of the correspondence division. Dr. Harlan Updegraff, who has served as chief of the Alaska Division during the past two years, has been appointed collector and compiler of statistics, succeeding Mr. W. Dawson Johnston, who has been appointed librarian of Columbia University in succession to the late Dr. Canfield. Dr. Updegraff's principal duties will have to do with the relations of the Bureau with the chief school officers of the several States and cities of the country.

Arrangements have been made by the Bureau of Education and the Bureau of the Census for the collection by special census agents of financial statistics of the school systems of the larger cities. The statistical form used by the census office will be furnished shortly by the Bureau of Education to a number of these cities that can not be reached this year by the census agents. This form is the outcome of a conference between the two offices concerned. It is still in an experimental stage, but its use by the census office and the Bureau of Education is expected to develop any defects or weaknesses in it, and lead to the adoption of a form that will meet the conditions existing in the various cities of the country.

Another forward step has been taken as regards the prompt issuance of the annual report of the Commissioner of Education. On certain conditions, which can undoubtedly be met, the Public Printer has agreed to furnish bound copies of volume 1 of the annual report for 1909 on December first of this year, and volume 2 on March first of the year 1910. In view of this arrangement, it may now be confidently expected that the first volume, containing the general surveys and directories, will be in the hands of readers before the convening of those educational associations which meet during the holiday season; and the second volume, containing the statistical tables, will be received prior to the Easter vacation meetings.